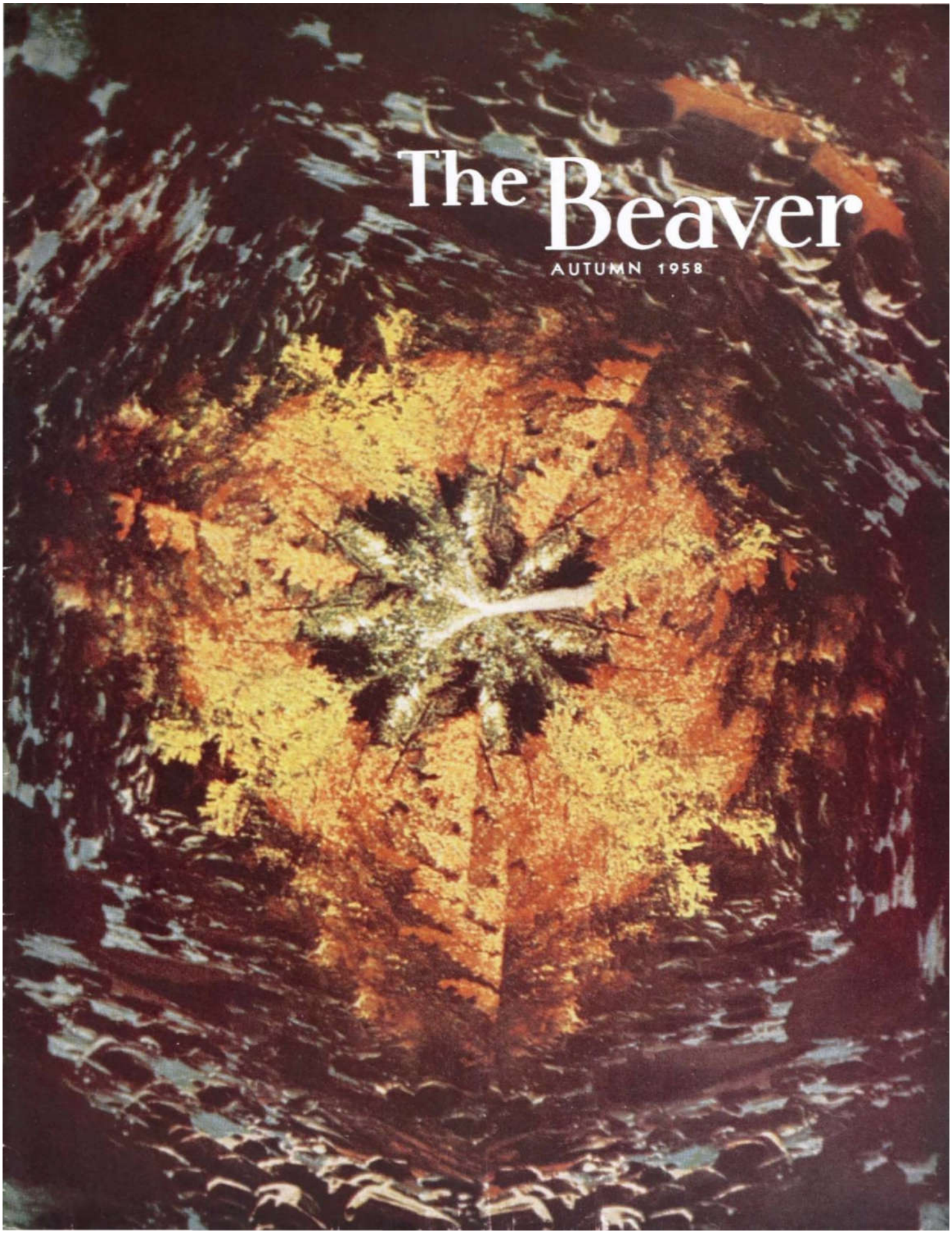
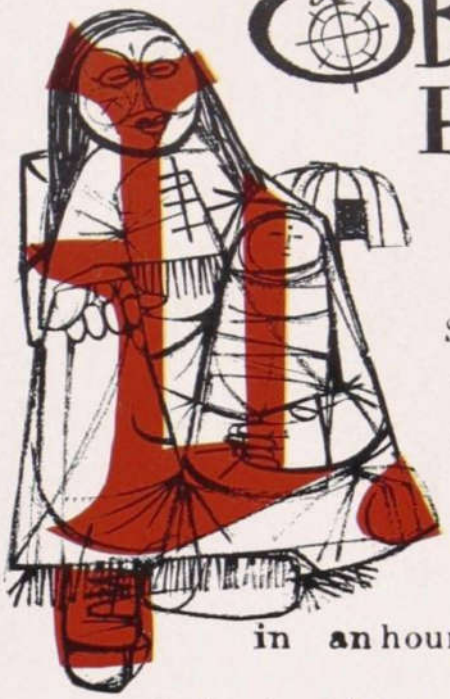


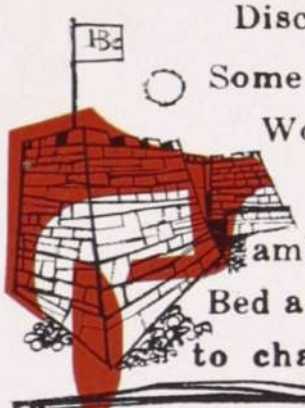
The Beaver

AUTUMN 1958



OBSERVATIONS on HUDSON'S BAY 1743 1749

Their Robust nature and Strong Constitution is Very surprizing having seen some women that has been Brought to bed upon the Bare ground, with the Heav'ns for a Canope', and in an hour afterwards has took the Child upon their back's, and has gone to the woods two Long miles, Brought a Stout Load of wood, which wou'd make a stout man to flinch, and be nothing atall Consern'd or Disconsolate about itt, I can not say but in Some parts of England, Necessity obliges the Women to use almost the same methods, —therefore I think itt's only pride an ambition, that some takes in Keeping their Bed a full month, and putting a poor C—'n to charge and Expence for aught.



JAMES ISHAM, whose Observations on Hudson's Bay provide a fascinating account of life during the mid-18th century at the two great northern forts of the H B C, took over Prince of Wales's Fort at the age of 25, and five years later, was made chief at York Factory, where he served on and off until his death there in 1761.

BY JAMES ISHAM

Hudson's Bay Company.

INCORPORATED 2ND MAY 1670.

The Beaver

AUTUMN 1958 OUTFIT 289

CONTENTS

PROMISE OF THE CANADIAN NORTH 4
R. G. Robertson

THE EXPLOITS OF LIEUT. MAYNE 12
Flora Hamilton Burns

SOME INSECTS 19
Harold V. Green

TO THE INLANDERS 22
John R. Sperry

DOBBS AND THE PASSAGE 26
Christian Brun

30 FORT LANGLEY IN RE-CREATION
J. Calder Peeps

40 LOVE MEDICINE
John C. Ewers

42 ACROSS THE RIVER
Grant Madison

46 THE JOURNALS OF WILLIAM ROWAN
John Patrick Gillese

54 NORTHERN BOOKS

58 AUTUMN PACKET

COVER

Pattern from nature: trees in autumn beside a rock-filled stream
Harold V. Green

PUBLISHED QUARTERLY BY

Hudson's Bay Company.
INCORPORATED 2ND MAY 1670.

HUDSON'S BAY HOUSE WINNIPEG 1, CANADA

Published by The Governor and Company of Adventurers of England Trading into Hudson's Bay, commonly known as the Hudson's Bay Company. The interests of THE BEAVER cover the territory with which the Company has been or is now associated, historically and currently. Annual subscription, $2; three years for $5; single copy, 50 cents. While every care will be taken of manuscripts and illustrations submitted, no liability will be assumed for loss. Authorized as second class mail, Post Office Department, Ottawa. Contents copyright. Printed in Canada.

Mr. Robertson, Commissioner of the Northwest Territories, has been Deputy Minister of the Department of Northern Affairs and National Resources since 1953.

The promise of the

Canadian North

BY R. G. ROBERTSON

CANADA'S deep north may prove to be one of the first spots on the face of this earth where the colour line is really dropped. That is the most exciting single feature of our rapidly accelerating northern development program.

Today, throughout northern Canada, communities are growing up—the new Aklavik and Frobisher Bay are prime examples—where Indians and Eskimos, white people, and men and women of mixed blood are living together side by side in the same type of house, with their children playing together and going to the same school. And we can look increasingly to a future in which the administration, the mining, the operation of airfields and trains and machines, the buying and selling, and all the countless tasks that make life meaningful and productive will be carried on by individuals who do not enquire whether the man above, below or alongside them is an Indian or an Eskimo or a white.

This trend towards tolerance is probably not indicative of any special virtue exclusive to northern residents. It is more likely a product of necessity. But the important thing, whatever the cause, is that it is beginning to happen.

The Indians and Eskimos of the north are rapidly losing a way of life, one that they understood and to which they were adapted. This is resulting entirely from the influence of white civilization. It is not that we have actively sought to destroy their way of life, but, almost without exception, the customs and practices introduced by the white man have had the effect of undermining modes of living ages-old. There is now no turning back either for the natives or for us.

There can be little doubt that the Indians and Eskimos of the far north are the most depressed economic group in Canada. For example, in the Northwest Territories the purchasing power derived from the fur trade—the chief source of cash income—is only two thirds of what it was before World War II. But in the meantime the number dependent on it has gone up substantially. And as competition from synthetic furs increases, the fur trade can only go in one direction—down.

The caribou herds, which have been the chief source of food and clothing, have been declining steadily and drastically. When in 1949 their numbers east of the Mackenzie River were estimated at about 650,000, this low figure caused consternation and disbelief. But last year's estimate was only 200,000 caribou, less than one-third the total recorded a short eight years before. It is certain that never again will the native peoples of the north be able to depend on the land and sea—on hunting and trapping—for their livelihood. More and more must learn our way of life and fit into our tasks, not because they are better or because we have a superior way of living, but simply because there may be no other way in which their increasing numbers will be able to live.

Drawings by F. Oakley

To enable them to make the transition to the new way of life the first need is for education. At present only about ten per cent of the Eskimo people are literate and only about twenty or twenty-five per cent of the northern Indians. Schools are now being built throughout the north, and hostels for children to live in who cannot go to day schools near their own homes. Vocational training is being progressively extended. It was only lately that these facilities have been recognized as an urgent necessity, so swiftly has the native economy changed.

The transition will involve great personal adjustments for the nomadic hunter who is forced to become a slave to the clock and for the wife whose tasks, learned from childhood, must become completely different. These people are faced with a very difficult period. The disruption of old patterns of life, old customs, old standards of value, can produce many casualties. But it is possible that they may, in the longer term, be better off than some of our native people in southern Canada. And there can be no doubt that they will make an increasingly rich contribution to Canada's national life.

This is the human side of Canada's north country. What about the future prospects for material development?

The Canadian north—the part within the provinces and the vast area of the two Territories (Yukon and Northwest)—is one of the world's last frontiers. Its tantalizing possibilities, and the uncertainties and obscurities surrounding its future, provoke much of our speculation as to the prospects for Canada as a whole in this century that was to be ours. For much of the answer to the national riddle depends upon the future of the north. And yet until as few as four or five years ago the question of the future of these enormous regions was one that remained almost unasked by the 85 per cent of our people who live within 150 miles of the United States border.

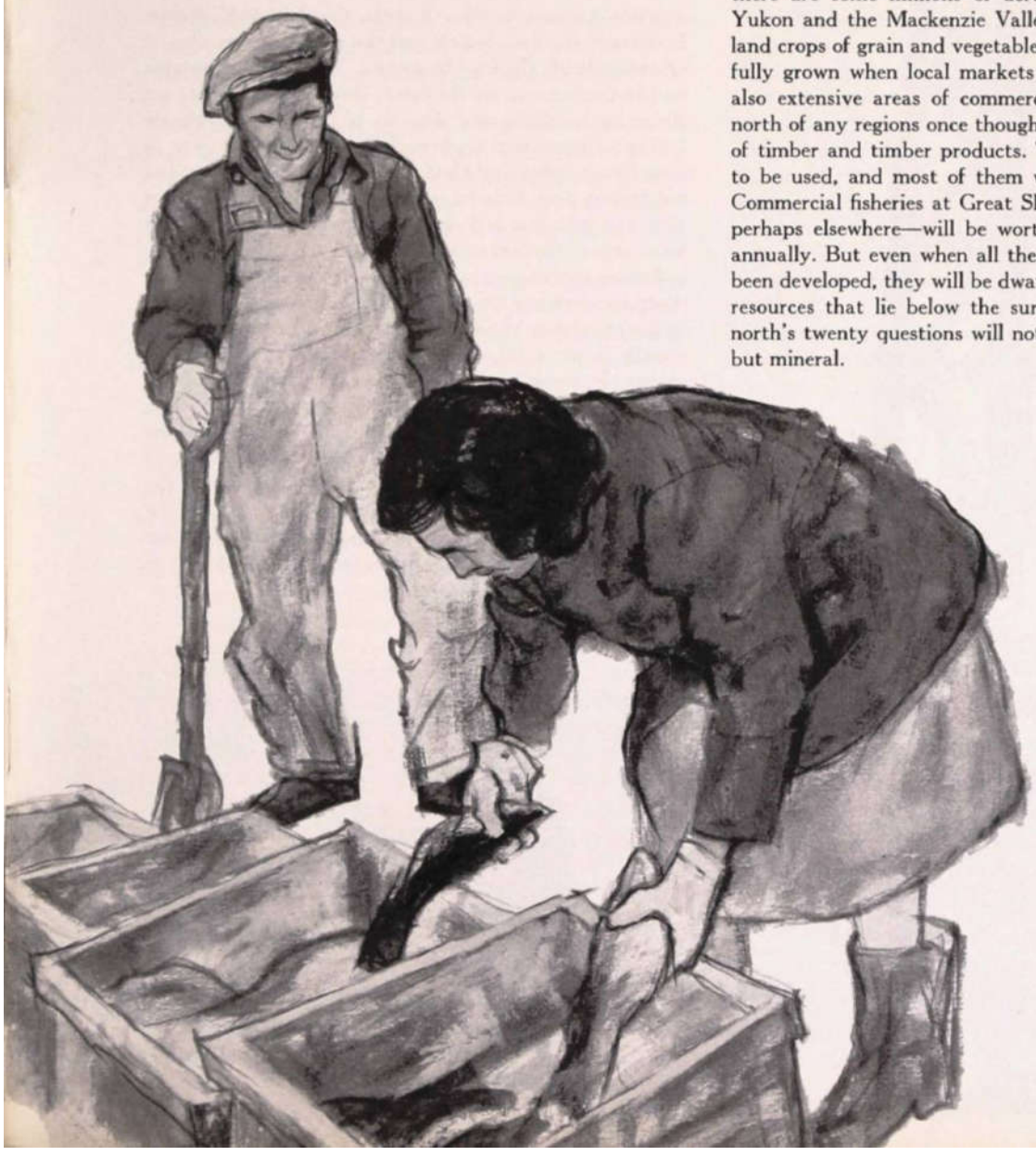
Of the lands which Canada acquired from the Hudson's Bay Company and the British Government in 1869—the drainage basin of Hudson Bay and the more northerly and westerly areas reaching to the Alaskan boundary—the parts valued for their apparent potential were distributed among the provinces. Each province proceeded largely to forget the northern areas it received. As for the Territories, they virtually disappeared from the national consciousness. The Klondike gold rush jolted the country into a temporary awareness about the turn of the century. When it died out, so did the one faint flicker of interest in our far north. So completely was the north forgotten that as recently as ten years ago the entire Northwest Territories, except for Yellowknife, contained no school built by any level of government—national, territorial, or local. The north was left to missionaries, Hudson's Bay traders, R.C.M. Police, the Eskimos and the Indians.

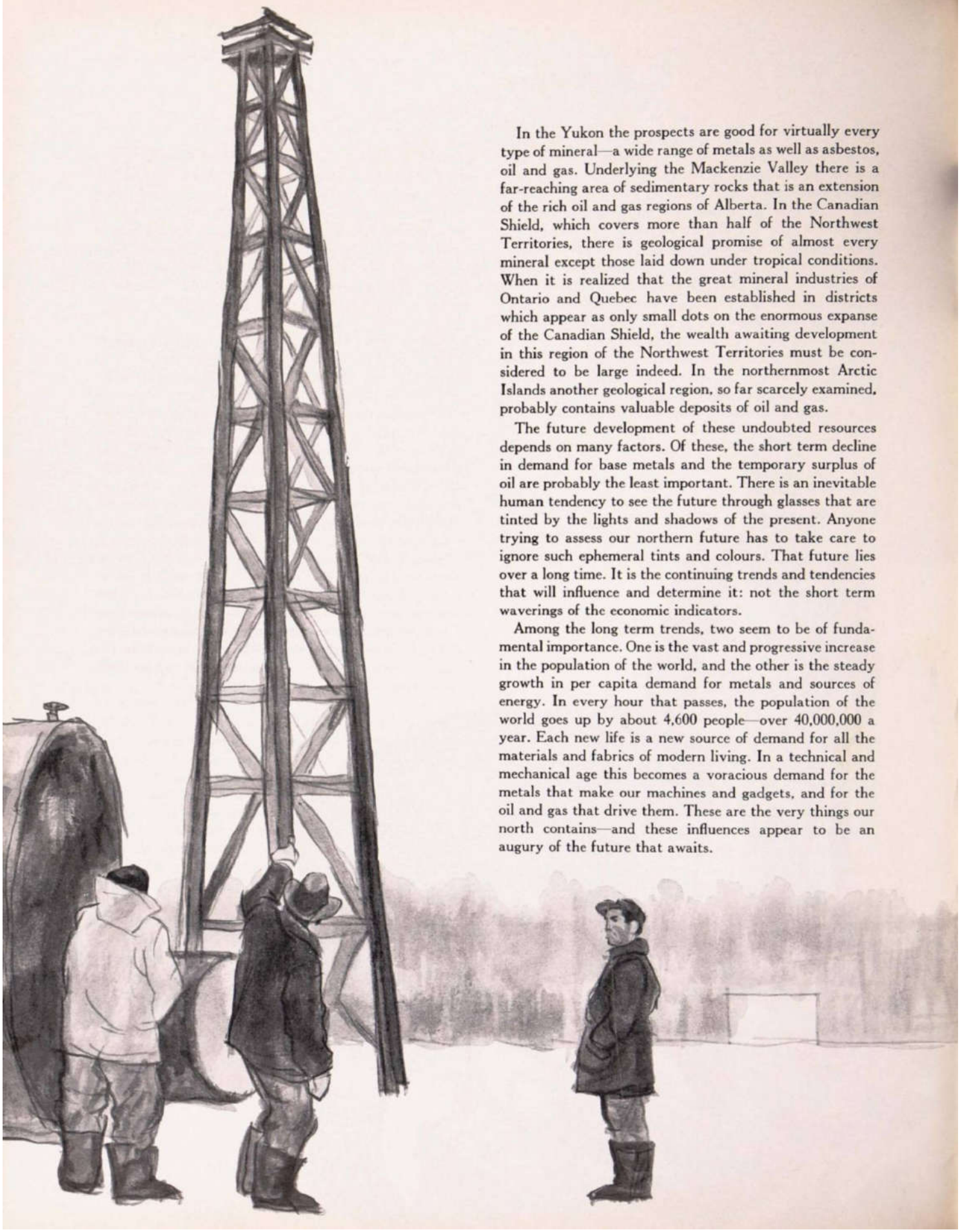
That is no longer the case. Canadians have at last realized that the far north is an area that merits the nation's attention.

The north that has aroused most questioning as to what the future holds is the more remote region that lies beyond the provinces. As a land unfamiliar to Canadians it has fostered myth and misconception clouding its future still further in the public mind. Contrary to common impression this north is not a homogeneous mass lending itself to ready generalization. Nor is it an unending winter of constant cold, deep snow and enveloping ice.

The Yukon—with its mountains, valleys, and broad plateaus, its mixture of white and Indian population largely dependent on mining—bears almost no relation to the adjacent Mackenzie Valley with its low, flat land covered with forest and muskeg. Each of these in turn is quite unlike the endless rock of the Canadian Shield and the Arctic Islands. The three regions do have three things in common: enormous size, a cold winter climate, and low precipitation. They are alike too in having a population so small as to make this one of the most sparsely settled areas anywhere in the world. But otherwise they are distinct regions differing in resources, prospects and problems, in the nature of their future and the pace at which it is likely to be realized.

Many question marks overhang the economic prospects of the north. All is not uncertainty, however, and the facts that are known all suggest that its future will be an extremely interesting one. The principal source of its economic development, it is clear, will be underground. True, there are some millions of acres of arable land in the Yukon and the Mackenzie Valley, and on much of that land crops of grain and vegetables can and will be successfully grown when local markets are available. There are also extensive areas of commercially valuable forest far north of any regions once thought of as important sources of timber and timber products. These are now beginning to be used, and most of them will one day have value. Commercial fisheries at Great Slave Lake—and in future perhaps elsewhere—will be worth several million dollars annually. But even when all these surface resources have been developed, they will be dwarfed in importance by the resources that lie below the surface. The answer to the north's twenty questions will not be animal or vegetable, but mineral.





In the Yukon the prospects are good for virtually every type of mineral—a wide range of metals as well as asbestos, oil and gas. Underlying the Mackenzie Valley there is a far-reaching area of sedimentary rocks that is an extension of the rich oil and gas regions of Alberta. In the Canadian Shield, which covers more than half of the Northwest Territories, there is geological promise of almost every mineral except those laid down under tropical conditions. When it is realized that the great mineral industries of Ontario and Quebec have been established in districts which appear as only small dots on the enormous expanse of the Canadian Shield, the wealth awaiting development in this region of the Northwest Territories must be considered to be large indeed. In the northernmost Arctic Islands another geological region, so far scarcely examined, probably contains valuable deposits of oil and gas.

The future development of these undoubted resources depends on many factors. Of these, the short term decline in demand for base metals and the temporary surplus of oil are probably the least important. There is an inevitable human tendency to see the future through glasses that are tinted by the lights and shadows of the present. Anyone trying to assess our northern future has to take care to ignore such ephemeral tints and colours. That future lies over a long time. It is the continuing trends and tendencies that will influence and determine it: not the short term waverings of the economic indicators.

Among the long term trends, two seem to be of fundamental importance. One is the vast and progressive increase in the population of the world, and the other is the steady growth in per capita demand for metals and sources of energy. In every hour that passes, the population of the world goes up by about 4,600 people—over 40,000,000 a year. Each new life is a new source of demand for all the materials and fabrics of modern living. In a technical and mechanical age this becomes a voracious demand for the metals that make our machines and gadgets, and for the oil and gas that drive them. These are the very things our north contains—and these influences appear to be an augury of the future that awaits.

Of course, this is by no means the whole answer. The richest resources are of no value if they cannot be made available to people who want them—and at prices they are willing to pay.

Is it likely that many of our northern resources can be made available at low enough costs to be economic? To this question part of the answer is known. Northern costs are high. For most resources they are today too high to enable them to be exploited. They are high for two reasons. One is the climate.

Contrary to what is perhaps a widespread opinion, the climate is not a barrier in the way of northern development. Illustrating this is the fact that mines at Knob Lake and at Rankin Inlet on the shore of Hudson Bay operate in climates practically as severe as the north offers anywhere. For the growth of mining industry the significance of climate lies chiefly in the burden of costs it imposes. It adds to the cost of heating plants, buildings, and homes, and adds to the cost of clothing. While it creates a number of technical problems these can be met, but usually only at a cost. The climate undoubtedly turns up on the wrong side of the ledger.

However, the main factor in the high costs of economic development in the north is not the climate. If it were, we would be stuck, for we can do little about it. Fortunately it is something else—a problem that can be solved—the problem of transportation. The north is everywhere distant from sources of supply and from markets. Even where facilities for transportation already exist, distance is important—for every mile costs money. But where the facilities do not exist or are deficient—and this is the case throughout most of the north—remoteness is a much greater problem, for then the facilities have first to be provided, and this in itself is enormously expensive.

In the long run, the pressure of growing demand will undoubtedly result in higher prices for virtually all minerals. At some point the price will in most cases exceed the high costs of northern supplies even on the basis of present techniques. Despite the present high costs of transportation, mining has been for years an expanding industry in the north. For promoting its further growth the overriding necessity is that transportation facilities be expanded and improved. By reducing costs, better facilities will make more developments in the north economic, thereby creating the traffic which will reduce transportation costs still further. The central fact is that if means of transportation must wait upon economic development they will be slow in coming—and so will economic development.

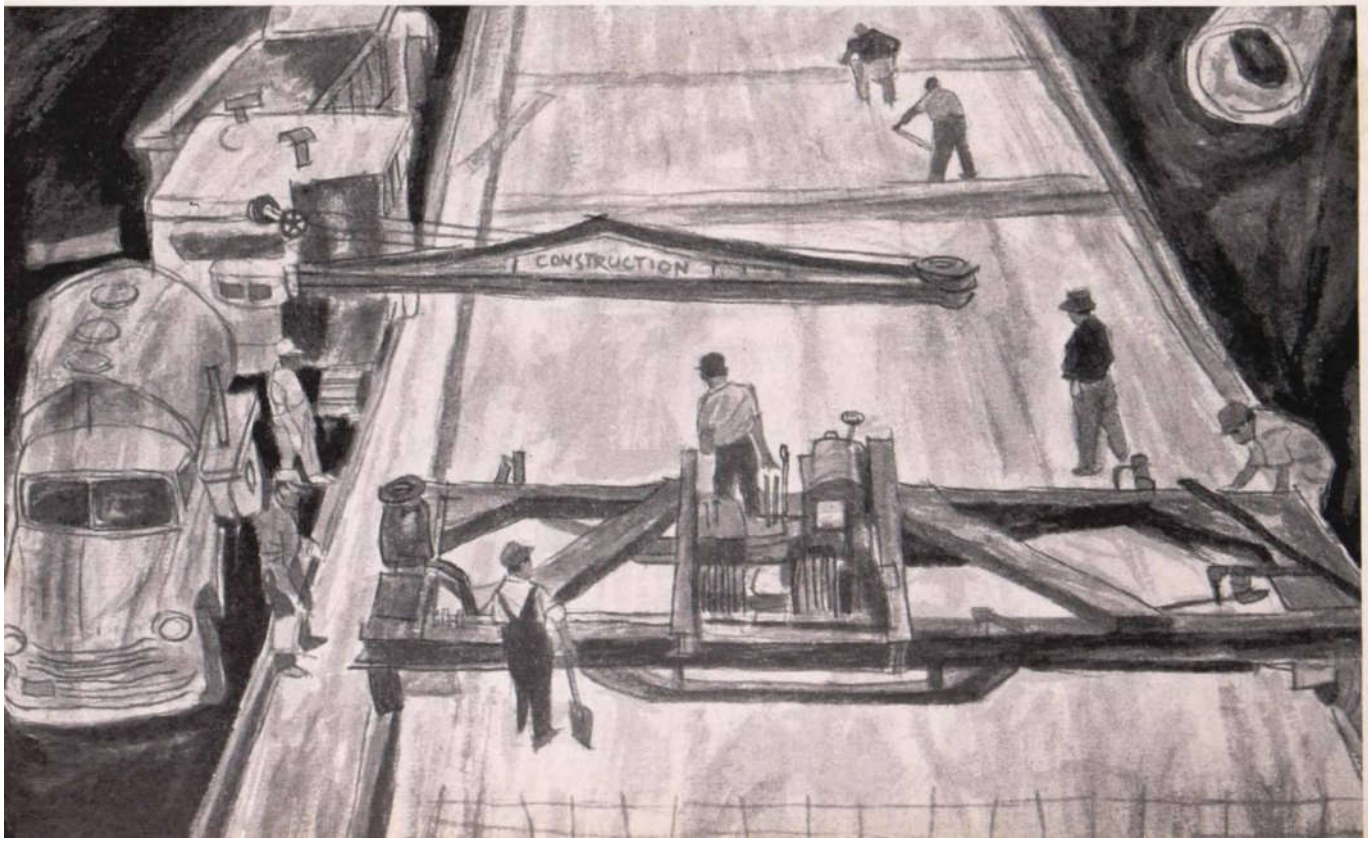
Examined in this light the transportation facilities which the nation has provided in the north so far appear remarkable only for their inadequacy. The need for their expansion is especially acute in the Northwest Territories, whose interior has surface connections with the south solely by the Mackenzie River system and a highway extending only to Great Slave Lake. Its resources remain largely inaccessible. One essential for the development of the whole Mackenzie District—a railroad to Great Slave Lake—is now on the point of becoming a reality. The government has also recently announced new highway and access road programs that will open additional areas to economic development. All of these things will do much, both to increase our knowledge of the resources available and to make possible their exploitation in the national interest. No measures, however extensive, can eliminate altogether the costs that distance imposes. But a great deal can be done to make them less burdensome for those who are prepared to invest in our northern future.

How quickly the northern economy will develop is a question which, considering the factors of demand and supply, turns in large part on access to the territories' mineral resources. Given the means of transportation the north will, without doubt, eventually assume major economic importance.

Because of its location, the far north is also a region of growing strategic significance, not simply for defence but for all the purposes of the air age. From the standpoint of air transportation, the northern hemisphere—the home of 90 per cent of the world's population—has its centre in the Arctic Ocean, the world's smallest ocean. In terms of global geography in this age of jet planes and missiles, northern Canada lies, not on the edge of the world, but at its very heart. The implications of this fact for defence and for air transportation are becoming clearer every day. The economic possibilities of this fact have yet to emerge, but it would be rash to assume that there will be none. Techniques of transportation which are unknown or uneconomic today could, with the passage of years, give great importance and value to the location of our Arctic regions on the shores of the mediterranean of the twentieth century—the Arctic Ocean.

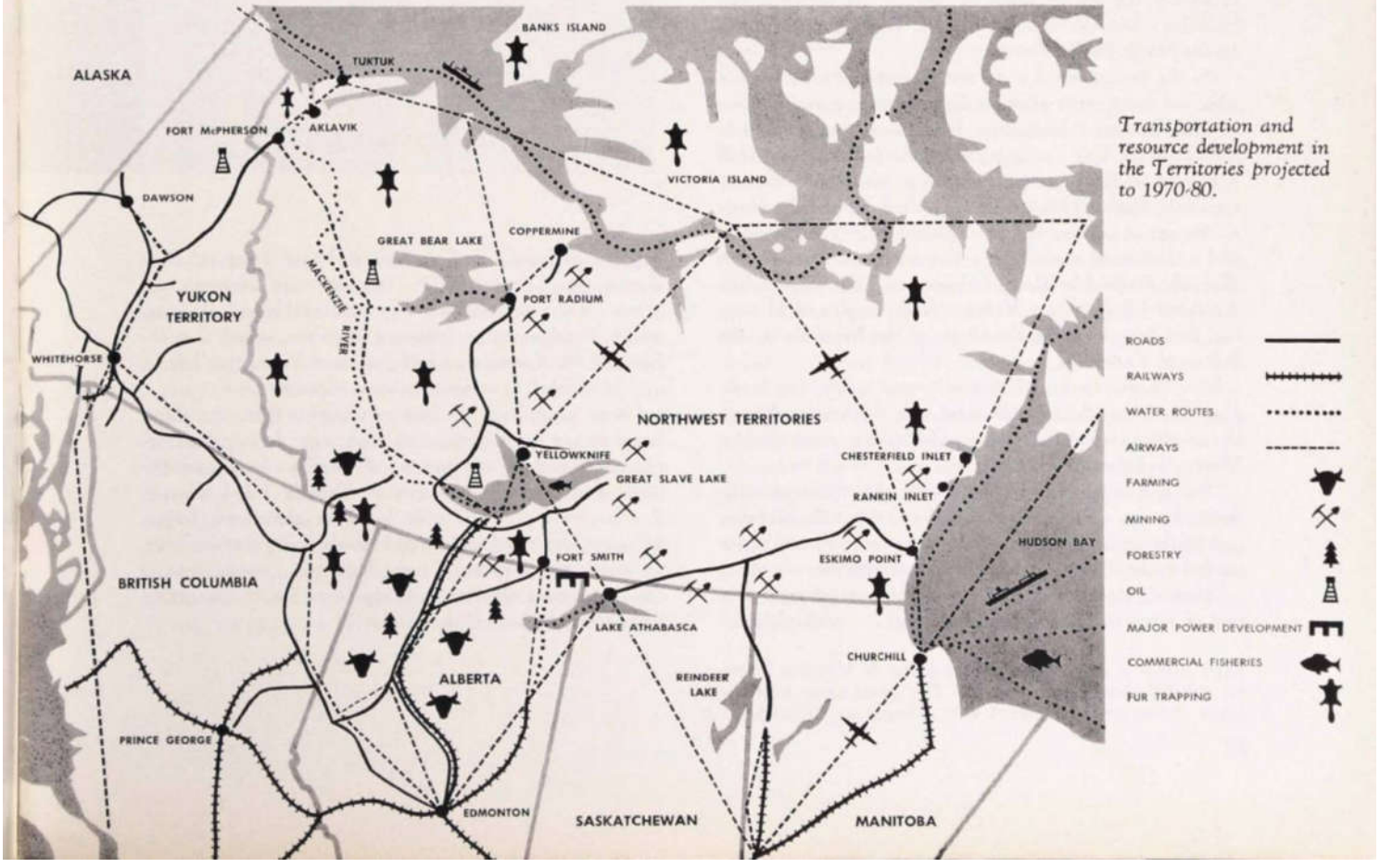
How will the north of the future look a few years hence? We can, I think, be fairly sure that there will not be large cities like those of the south. There will probably be a few centres of 50,000 or so in the Yukon and the Mackenzie Valley—the focal points of road and rail transportation. In these two regions there will probably be areas too of farming—mostly for the local markets—and of lumbering and commercial fishing. There will probably also be ranching in the valley of the Slave River.

But over most of the north the future will likely appear much the way it now looks in our southern "north"—in the mining regions of northern Ontario and Quebec. Scattered communities—some a thousand or two in population, others ten or fifteen thousand—grown up around mines of



all kinds. They will be linked to the south or to seaboard by road or rail in most cases, but some will probably depend on large and efficient aircraft to carry in their equipment and supplies and carry out their mineral product.

We have a long way to go and much to do before the great potentialities of the north are realized. For too many years we have wandered—not in the wilderness, but in the smug comfort of our southern fastnesses. We have at last, however, become aware that we have a rich promised land in the north we had forgotten so long. ◆



Transportation and resource development in the Territories projected to 1970-80.

Richard Charles Mayne retired with the rank of rear-admiral in 1879 and was gazetted vice-admiral six years later. He died suddenly in 1892 after attending a banquet in London.

The Exploits of Lieut. Mayne, R.N.

BY FLORA HAMILTON BURNS

A century ago this sailor-surveyor knew the Pacific coast and a good part of the British Columbia interior.

Photographs from B.C. Archives

ON the 9th of November 1857 H.M. Auxiliary Steamship *Plumper* rounded Race Rocks and steamed into Esquimalt Harbour after an eight months' voyage from England. She had been specially fitted out to survey the sea passages to confirm the International Boundary between the British and American territories on the North Pacific Coast.

On the bridge was Lieutenant Richard Charles Mayne who had spent some weeks at Esquimalt as a midshipman in 1849, just after Vancouver Island had been granted to the Hudson's Bay Company for colonization to forestall American or Russian encroachments. Lieutenant Mayne, son of Sir Richard Mayne, K.C.B., had entered the Navy at the age of twelve, and now, although only twenty-one, had a chestful of medals for active service in the Crimean War: the Baltic Medal, the Crimean and Turkish Medals, the Azoff Clasp; was a Knight of the Legion of Honour and had been awarded the Order of the Medjidie by the Sultan of Turkey.

Now he was back at Esquimalt, and in his racy book, *Four Years in British Columbia and Vancouver Island*, he has given an indelible picture of Victoria a century ago. Mayne said that on his first visit,

"Not a house was to be seen on its shores [Esquimalt]; we used to fire shot and shell as we liked about the harbour, and might send parties ashore to cut as much wood as we needed without the least chance of interruption.

"Now, as we entered, I was surprised to catch sight of a row of respectable, well-kept buildings . . . with pleasant gardens in front. . . . This was a Naval Hospital built during the Crimean War. Opposite the hospital, our attention was directed to a very comfortable and, standing where it did, a rather imposing residence, which was the house of Mr. Cameron, Chief Justice of Vancouver Island, and in which I have spent many a pleasant hour.

"Nine years back we had to scramble from the ship's boats to the most convenient rock; now Jones's landing-place received us; and instead of forcing a path over the rocks and through the bush to Victoria Inlet, whence, if a native happened to be lounging about the Indian village of the Songhies . . . and should bring a canoe over, we might reach Victoria, a carriage road, perhaps not of the best, and a serviceable bridge were found connecting Esquimalt Harbour with Victoria."

Miss Burns is a free-lance writer living in Victoria where her grandfather settled in 1851. Her great-uncle was the Lieut. Moriarty who served with Mayne in "Plumper."

Lieutenant Mayne did not think much of Victoria and compared the harbour most unfavourably with Esquimalt. In his opinion:

"It is highly problematical whether it can ever be made a safe and convenient port for vessels even of moderate tonnage. . . . The entrance is narrow, shoal and intricate. . . . Under the most favourable circumstances ships are constantly running aground. . . . I cannot imagine any sensible master of an ocean ship endeavouring to wriggle his vessel into Victoria with the larger and safer harbour of Esquimalt handy."

He added, "Very few words need be given to the description of Victoria," and summed it up by stating that the Company's Fort was long the chief feature of the place though its palisades had now been demolished; that Mr. Douglas, the Governor, had built himself a house on the south side of James's Bay, and Mr. Work, Chief Factor, another above Rock Bay, which formed the nucleus of a little group of buildings which rose so slowly that even in 1857 there was only one small wharf. Mayne was a charming and popular young man, and he concludes his description characteristically:

"As it was, the place was very pleasant, and society frank and agreeable. No ceremony was known in those pleasant times. All the half-dozen houses that made up the town were open to us. In fine weather, riding-parties of the gentlemen and ladies of the place were formed, and we returned generally to a high tea, or tea-dinner, at Mr. Douglas's or Mr. Work's, winding up the pleasant evening with dance and song. We thought nothing then of starting off to Victoria in sea-boots, carrying others in our pockets, just to enjoy a pleasant evening by a good log-fire. And we cared as little for the weary tramp homeward to Esquimalt in the dark, although it happened sometimes that men lost their way, and had to sleep in the bush all night."

Such was Victoria when H.M.S. *Plumper* left on her spring survey trip in February, 1858. She called first at Port Townsend in Washington, to pick up mail. Victoria was too insignificant for the San Francisco steamers to call there, and the Hudson's Bay Company received its mail only twice a month by canoe from the American side.

Three months later Mayne found an astounding transformation. He wrote:

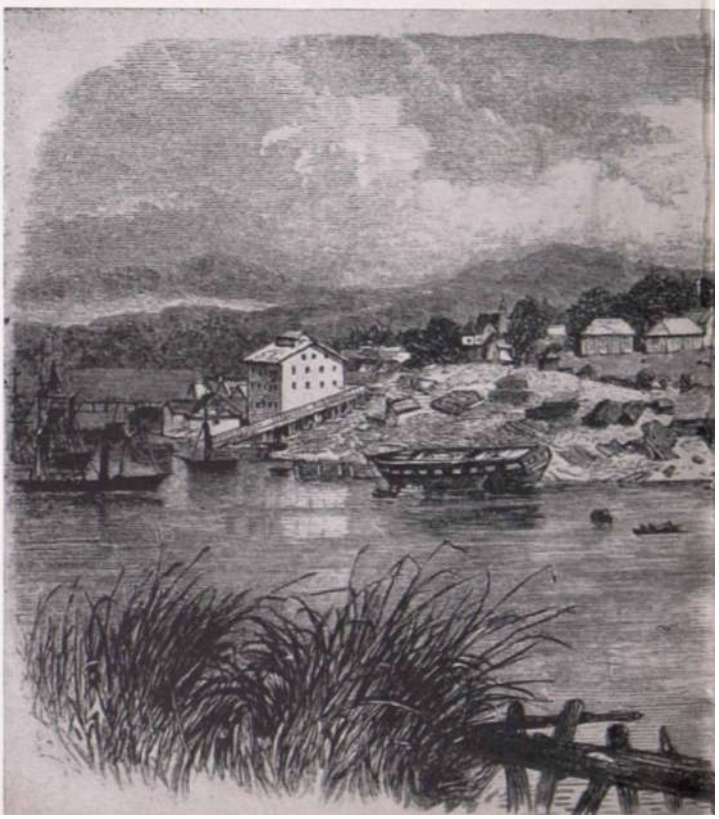
"We returned to Esquimalt on the 16th of May, to find that during our absence that most infectious of all maladies —a gold fever—had broken out. . . . The value of land had risen immensely . . . and all the available Government lands had been snapped up by far-seeing speculators when the first drops of the golden shower descended. . . . Merchants' stores were rising in every direction. . . . On the shores of the harbour wharves were being planted, and sailing ships laden with every description of article which a migratory population could, and in many cases, could not, want flowed into the harbour. . . . Here was actually a street . . . and in a short time even two or three. . . . Expectation was on every face which before had been placid—even stolid, when the great event had been the advent of the 'Princess Royal' once a year, with the latest fashions of the Old World and fresh supplies, human and material, for the Honourable Company's service. Now, with vessels arriving and leaving constantly, with thousands pouring into the port, and 'sensation' news from the Fraser daily, a new mind seemed to have taken possession of Victoria."

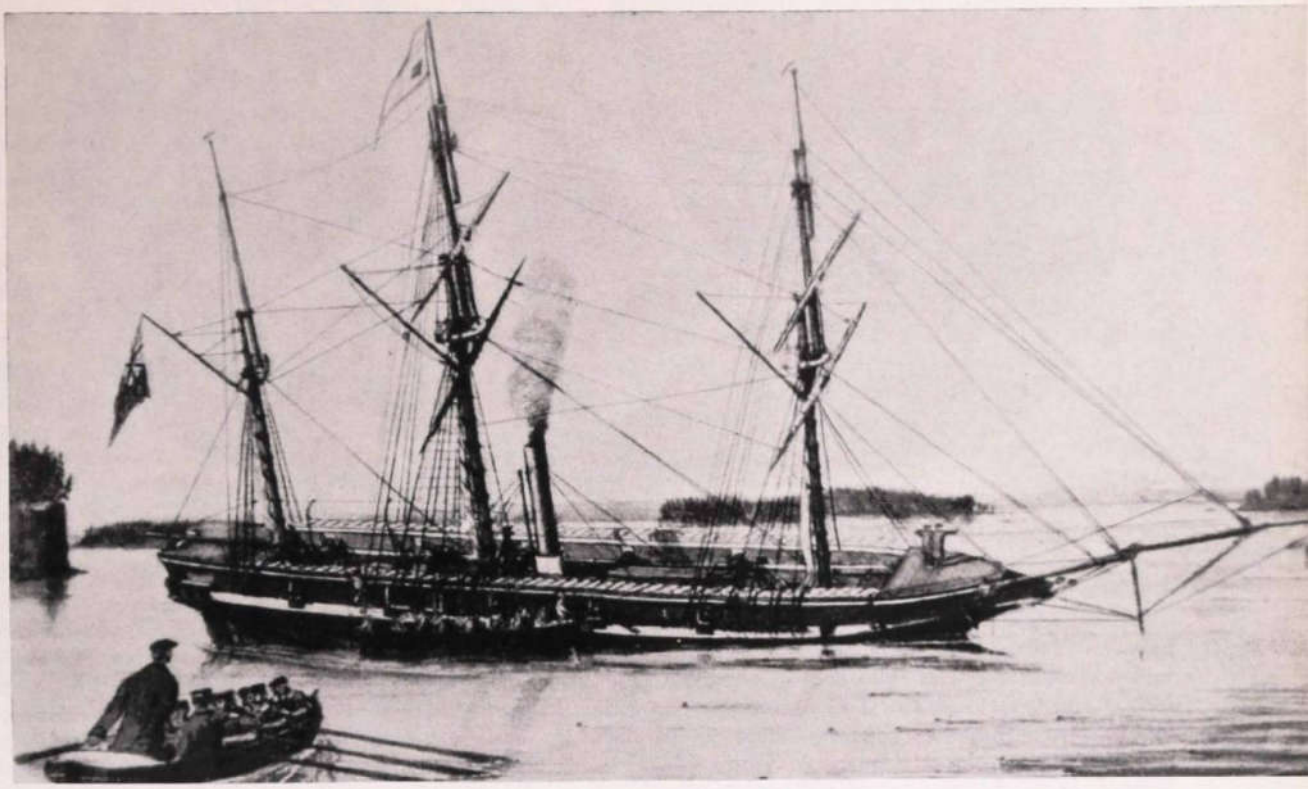
Officers of H.M.S. "Plumper" and the captain's wife at Victoria, photographed between 1858 and 1860. Sitting, l. to r.: Sub-Lieut. E. P. Bedwell, 2nd Lieut. R. C. Mayne, Mrs. G. H. Richards, 1st Lieut. William Moriarty. Standing: Ship's doctor, probably Dr. Wood; W. H. J. Brown, Paymaster; Capt. G. H. Richards, Surveyor and Boundary Commissioner; Lieut. Daniel Pender, 2nd Master.

The climax was reached when the San Francisco steamers *Orizaba* and *Cortez* landed 2,800 people on one day in July. Victoria could not shelter all these immigrants, and a tent town sprang up, while wherever time, material and money were available, wooden houses and stores were erected.

Contrary to many expectations, the immigrants were quiet and well behaved, and there was "no riot or unseemly noise round the town at night." The Boundary Commission, with a small party of Royal Engineers, had arrived, and H.M.S. *Plumper* was constantly in and out of harbour. However, one night the quiet tenor of life at Esquimalt was disturbed by a messenger from the Governor, asking Captain Richards of the *Plumper* to send an armed force at once to Victoria to quell an imminent disturbance. No one could describe the event better than Mayne:

"Steam was got up with all haste, and embarking the Engineers of the Boundary party, we started for Victoria . . . and thought it advisable to prepare ourselves for what might possibly be a grave encounter with the lawless spirits of California. . . . Reckless rascals who had escaped from the Vigilance Committee of San Francisco had been seen strolling about the canvas streets of Victoria . . . and the police force had only just been established and consisted of some dozen untrained men.

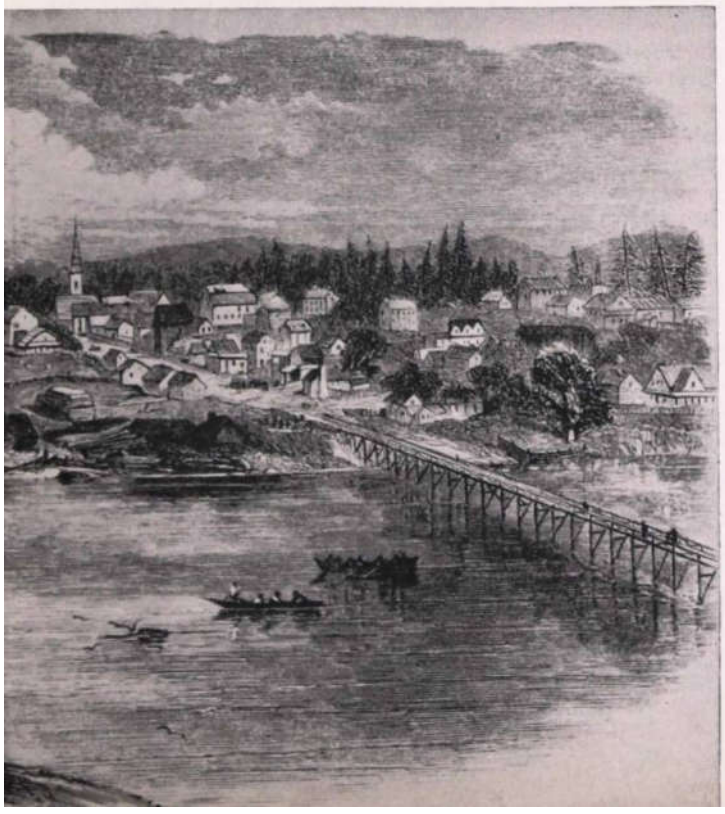




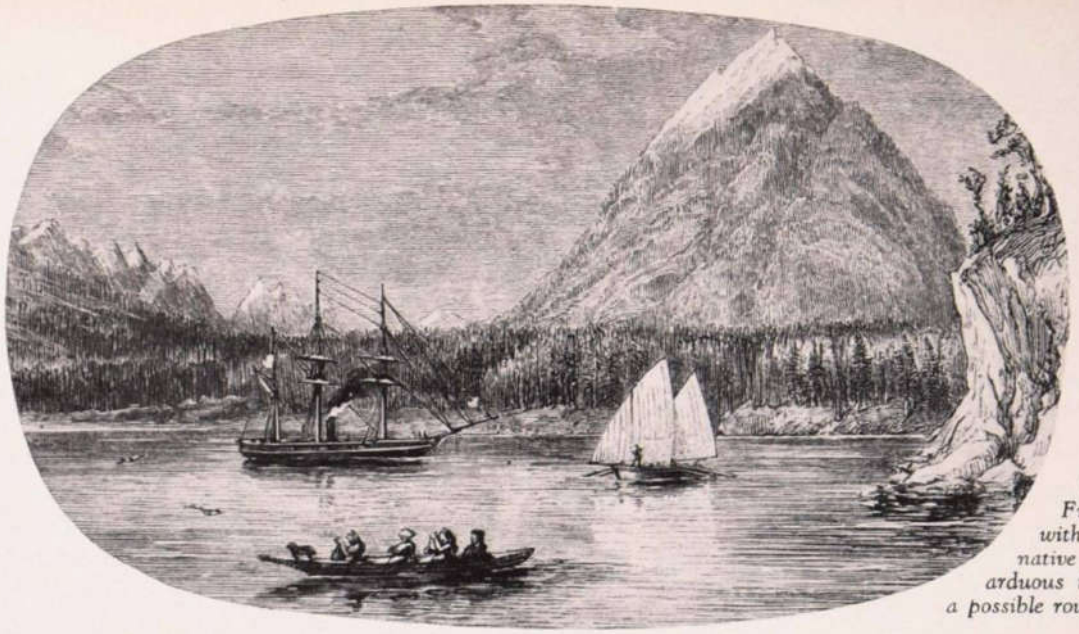
H.M.S. "Plumper" ashore off Discovery Island, not far from Victoria, in 1859. From a painting by Lieut. E. P. Bedwell.

"Upon the quarter-deck small-arm companies were having ammunition served out to them; forward, the ship's blacksmith was casting bullets by the score; while our doctor was spreading out his cold, shining instruments upon the wardroom table, and making arrangements for the most painful surgical operations with grave, business-like *sang-froid*. . . .

"Directly the ship anchored, we were landed and marched into the Fort square, where we were left under arms while Captain Richards waited upon the Governor. Whatever disturbance there had been, had evidently ceased, and his Excellency was found going or gone to bed. However, upon being informed of our arrival, he turned out, thanked and dismissed the troops, and our evening, begun so fiercely, wound up with a supper in the fort. Many a subsequent laugh have the recollections of that night's work excited. The fact proved to be that the police . . . had been prevented from arresting a drunken rioter by some of his companions who got him on board a schooner lying in the harbour. Under the escort of one of our boats, the police now felt themselves strong enough to effect his capture; . . . and a harmless, sleepy, drunken miner was dragged out of the hold and lugged ashore, where on the morrow, no doubt, he was soundly rated



Outside view of Victoria, an illustration from Mayne's book published in 1862. The spire is that of the first Methodist Church, erected in 1859, the same year the bridge was built.



"Plumper" with her pinnace, known as the "Shark" at the head of Jervis Inlet. From here Mayne with Dr. Wood and five native Indians made an arduous trip inland seeking a possible route to the Chilcotin.

and fined. So ended the first and only difficulty which has ever threatened the peace of Victoria from its white population."

Richard Mayne's serious exploits in British Columbia began on January 10th, 1859, when H.M.S. *Plumper* was again called into action, this time to reinforce Colonel Moody and twenty-five Royal Engineers who had gone up to Yale in pursuit of the notorious Californian murderer and "bad man," Ned McGowan. At Fort Langley the *Plumper* found that Colonel Moody had commandeered the steamer *Enterprise*, the only vessel capable of going farther up the Fraser with a field piece and gun crew, so Mayne was ordered to follow immediately by canoe with despatches for the Colonel, and bring back his instructions. Mr. Yale, the Hudson's Bay Company's officer at Fort Langley undertook to provide a canoe and crew. Wrote Mayne:

"My own preparations were soon made—a blanket, frock and trowsers, a couple of rugs, two or three pipes, plenty of tobacco, tea, coffee, some meat and bread, a frying-pan and saucepan completing my outfit.

"At this time canoe-travelling was quite new to me . . . and I well remember the curious sensations with which this my first journey was commenced. It was mid-winter, the snow lay several inches thick upon the ground; the latest reports from up the river spoke of much ice about and below Fort Hope, so I was by no means sorry to avail myself of the offer of Mr. Lewis of the Hudson Bay Company . . . to be my companion. Mr. Yale had . . . selected nine stout Indian paddlers, and when I landed they were waiting on the beach, dressed in their best blankets, with large streamers of bright red, blue, and yellow ribbons, in which they so much delight, flying from their caps. Mr. Yale had harangued them and presented them with these streamers to impress them with the importance of the service in which they were engaged. . . . Away we started . . . the crew singing at the top of their wild, shrill voices, their parti-coloured decorations streaming in the bitter winter wind. . . .

"We paddled along quickly until five o'clock when we stopped for supper, and, landing, made tea. This meal over we started again and held on steadily all night. If the journey by day was strange and somewhat exciting, how much more so did it become when night set in! Wet, cold, tired, we rolled ourselves in the rugs, and in time fell into a broken sleep. . . . Ever and anon, roused by a louder shout from the paddlers, we started up to find the canoe sweeping . . . by some miner's watch-fire, from which an indistinct figure would rise, gaze at us wonderingly and in some fear perhaps, as we swept howling by . . . near enough for the glare to light up the dark figures straining at their hard work, and their wild, swarthy faces, with the long, bright ribbons streaming behind them. Who could be travelling on the river at night, and in such a season!"

The voyage took three days and almost three nights of constant travelling. The canoe was lost—split fore and aft by a jagged rock in the swirling, ice-filled waters at Murderer's Bar—and the party owed their lives to the courage and skill of the Indians in reaching the shore. It was late at night when, drenched, frozen and exhausted, they reached Hope on foot, where they found Colonel Moody and Captain Grant of the Royal Engineers, Judge Begbie and others, all crowded into the small bed-sitting room of the Fort officer.

Colonel Moody decided that he, Judge Begbie and Mayne should push on alone next day to Yale, to size up the situation. Yale was quiet, but a day or two later McGowan committed an unprovoked assault which led the Colonel to believe that this miner and his friends were ripe for serious insubordination. He instructed Mayne to drop down the river to Hope and Langley, and order up the Engineers, Marines and blue-jackets.

The utmost precautions were taken about Mayne's journey, as he narrates:

"Mr. Allard, the Hudson's Bay officer, was instructed to have a small canoe launched unseen by the miners who, it was thought, might endeavour to stop me. . . . The darkness was waited for, and the canoe being launched and dropped about half a mile down the river, Mr. Allard came to the house for me and led me to it along the river's bank. As we dropped down the stream I was afraid even to light a pipe lest we should be stopped at Hill's Bar where McGowan had a rich claim. . . . Reaching Hope at half-past eight that night, I very much astonished Captain Grant by telling him that he was to start for Yale at once. . . . The promptitude with which Captain Grant appeared on the spot with the Engineers at daybreak next morning astonished the miners, and it need not be assumed that because they apologized and paid their fines, they would have done so equally had coercion not been threatened.

"Having given my instructions, I embarked in the canoe again, and about midnight—spinning down the Fraser being a very different matter from struggling up against the current—I reached the 'Enterprise' which was to convey me to Langley and bring up the men there."

When Mayne returned to Yale with the Marines he found that McGowan, after enjoying the sensation he had caused, and no doubt sobered by the presence of the Engineers, had paid Colonel Moody a formal visit, made a frank apology for the hasty blow "which had disturbed the peace of British Columbia," and after an elaborate defence of his previous conduct, committed himself frankly into the hands of justice.

Mayne's adventures in British Columbia had only just begun. A few weeks later the Governor asked that an officer of the *Plumper* should make a running survey of the Fraser as far as Lillooet and report generally on those parts occupied by miners. Again the task devolved upon Mayne, accompanied by the ship's surgeon. They surveyed the terrific passage through the canyons from Yale to Lytton, which Judge Begbie, who made the journey that year, described as "utterly impassable for any animal except a man, a goat or a dog, and so terrible that experienced travellers shrank from undertaking it." They also surveyed the Kamloops, Shuswap, Thompson, Nicola, Lillooet and Harrison Lakes areas, an enormous circuit.

During the next two years, in addition to his extensive hydrographic work, Mayne, at the Governor's request, explored and mapped the route for the present highway from Nanaimo to Alberni, and the hinterland of Jervis Inlet, Howe Sound, and Squamish for a route through the Chilcotin to the mines of the Upper Fraser. Mayne's overland explorations in British Columbia are an amazing achievement—by an Eton scholar trained for the sea—and are an outstanding example of Governor Douglas's faculty for inducing people of all types to undertake the most difficult and arduous tasks for the public benefit, without remuneration.

So impressed was the Governor by Richard Mayne's outstanding abilities and personal qualities that he commended him in the highest terms in a special despatch to the Colonial Secretary. At the end of 1860 H.M.S. *Hecate* relieved the *Plumper*, and all her officers except First Lieutenant William Moriarty, who returned to England, were transferred to the new ship. Mayne was promoted to First Lieutenant, and in August 1861, while surveying Clayoquot Sound, Captain Richards handed him a letter, saying, "Here is something that concerns you as First Lieutenant." Only having held this appointment six months, Mayne immediately apprehended some question of minor discipline, and prepared to defend his conduct, when to his complete astonishment, and almost disbelief, he read: "I have to inform you that Lieutenant R. C. Mayne has been promoted to the rank of Commander."

Thus, at the early age of twenty-five, Richard Mayne was given command of H.M.S. *Eclipse* for the Australian Station. Returning to England, he was made a Fellow of the Royal Geographical Society, and the following year published his classic *Four Years in British Columbia and Vancouver Island*.

At the same time Governor Douglas appointed Commander Mayne one of three Royal Commissioners to represent British Columbia at the great International Exhibition in London in 1862, and the young man who said "very few words need be given to the description of Victoria," became a most enthusiastic, devoted and able publicity agent for the new colonies, and spent a great deal of time at the Exhibition, making known the advantages and natural wealth of British Columbia and Vancouver Island.

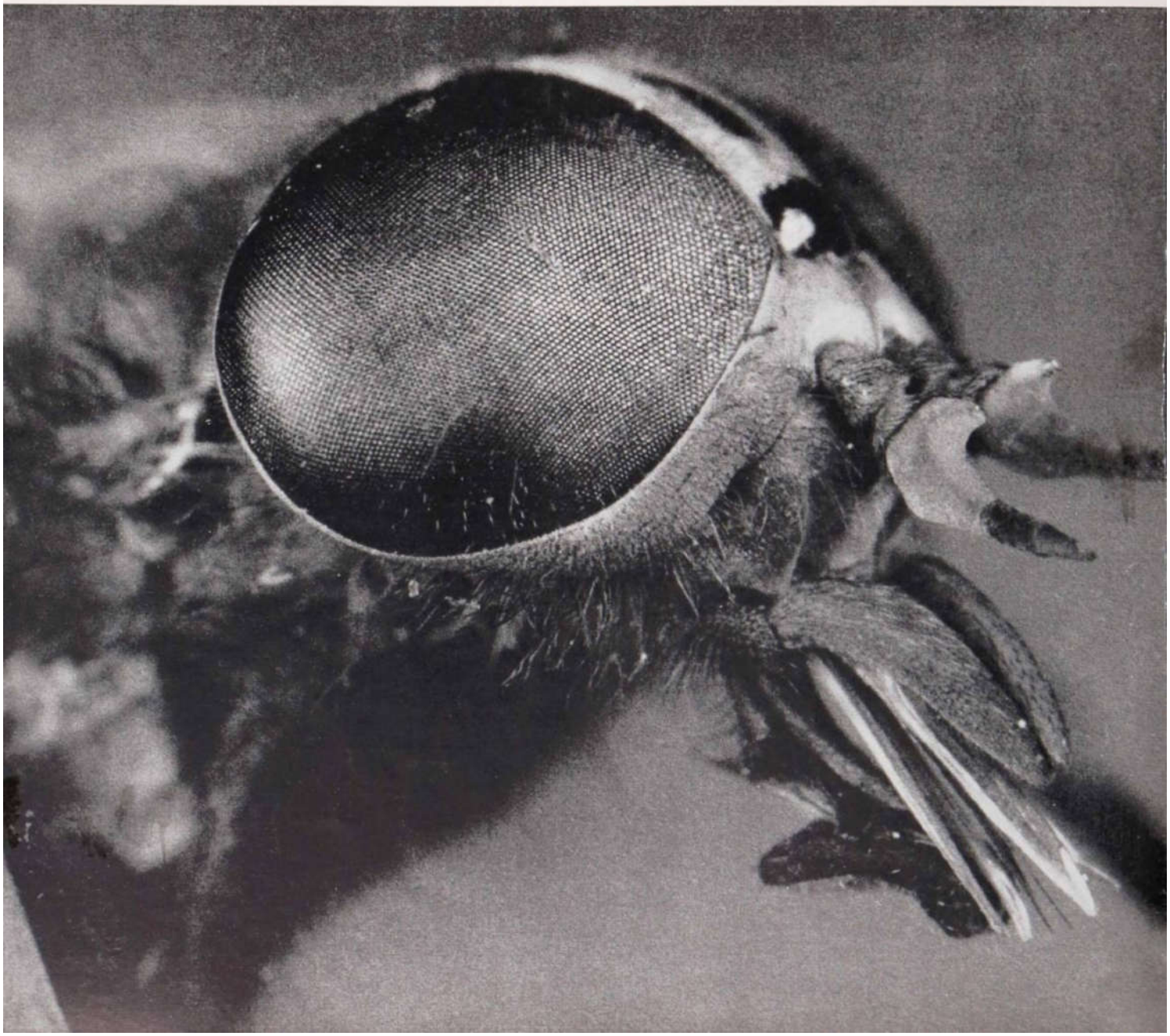
Richard Mayne's naval career again took him into active service, during which he was seriously wounded in a tribal attack on Rangariri, and received the New Zealand Medal. Four years later he was made a Companion of the Bath for his great work in surveying the Straits of Magellan, and at the age of forty-four he was promoted to Admiral. Upon his early retirement as a consequence of his New Zealand wound, he became a Member of Parliament but always went to sea during manoeuvres to keep abreast of naval matters. He died suddenly, aged fifty-six.

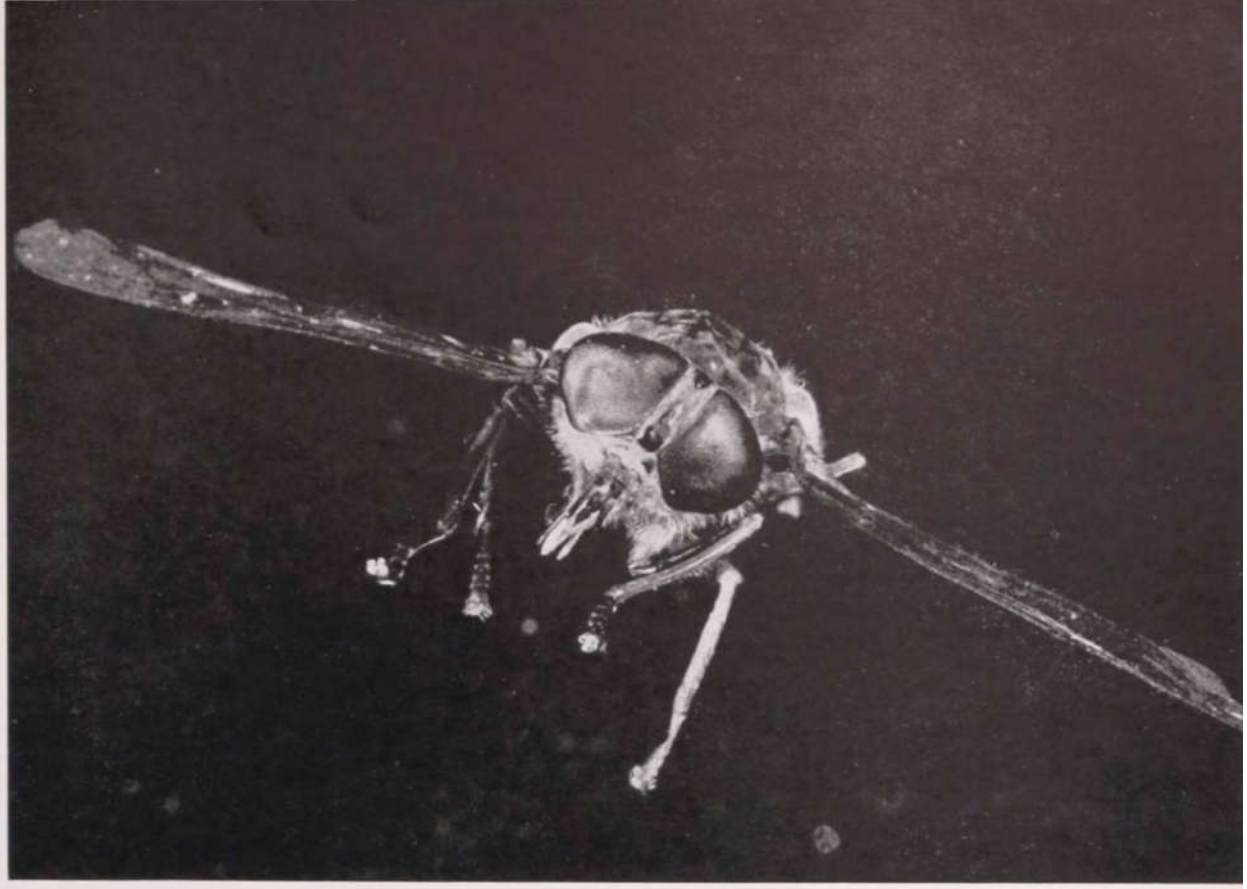
Distinguished in many fields, Admiral Mayne occupies a special and unique place in the history and geography of British Columbia, where Island, Peak and Passage perpetuate his name. •

SOME INSECTS

BY HAROLD V. GREEN, who has specialized in photographing small creatures in a large way, as well as creating unique designs from colour photographs, such as the cover subject on this issue.

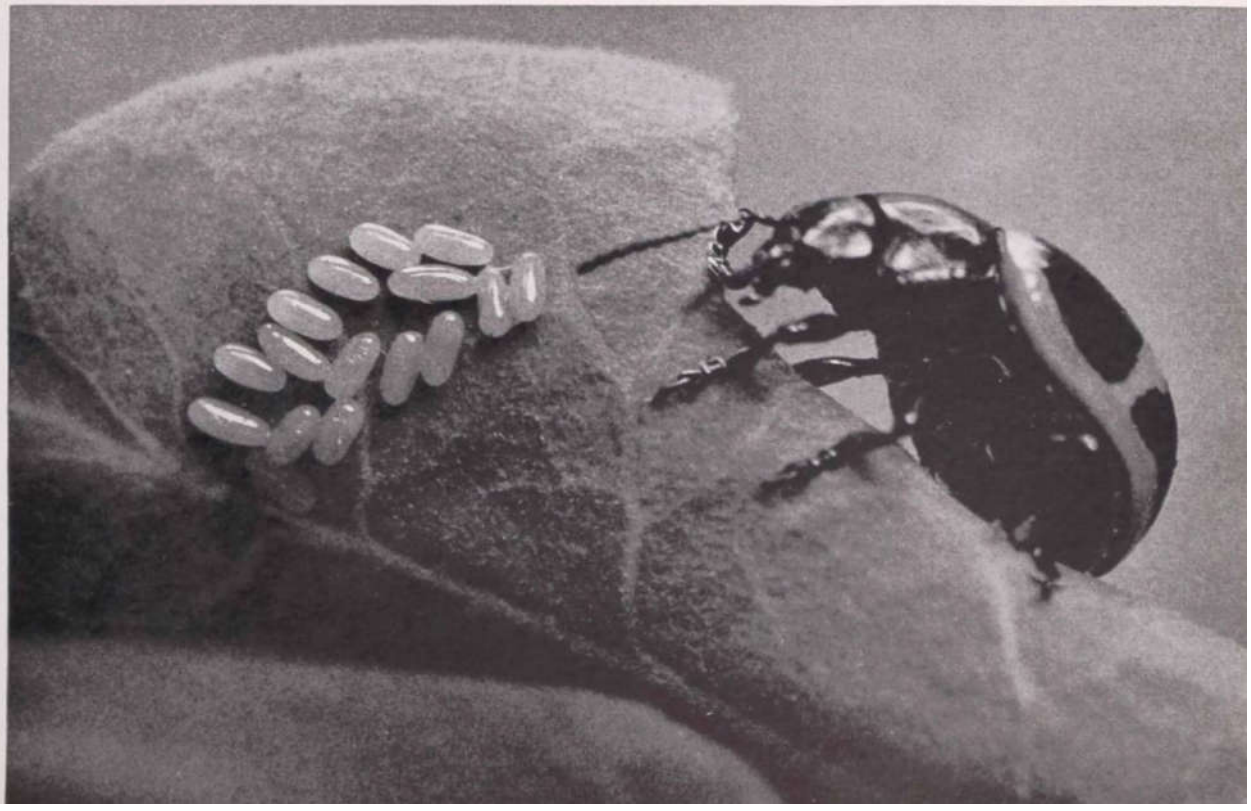
The large compound eye dominates this super close-up of the head of a horse-fly. Besides the bulging multi-faceted eye, it shows clearly the complex mouthparts and the short bristle-like antennae.

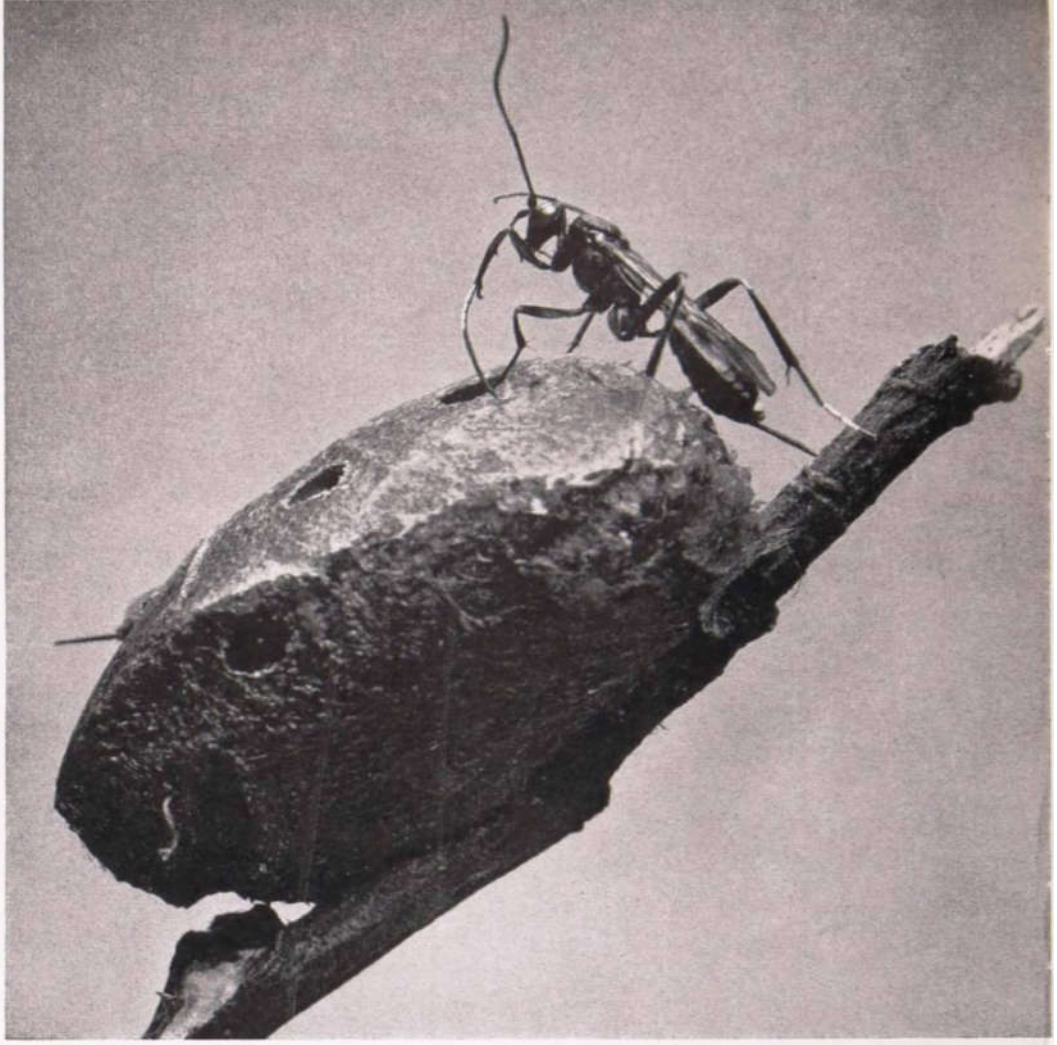




Most flies are strong, rapid flyers. This head-on view shows a horse-fly coming in for a landing. The wing tips are warped and the legs are extended ready to alight.

A decorative orange and black milkweed beetle and her glistening eggs. When the eggs hatch the larvae will munch on the succulent leaves.



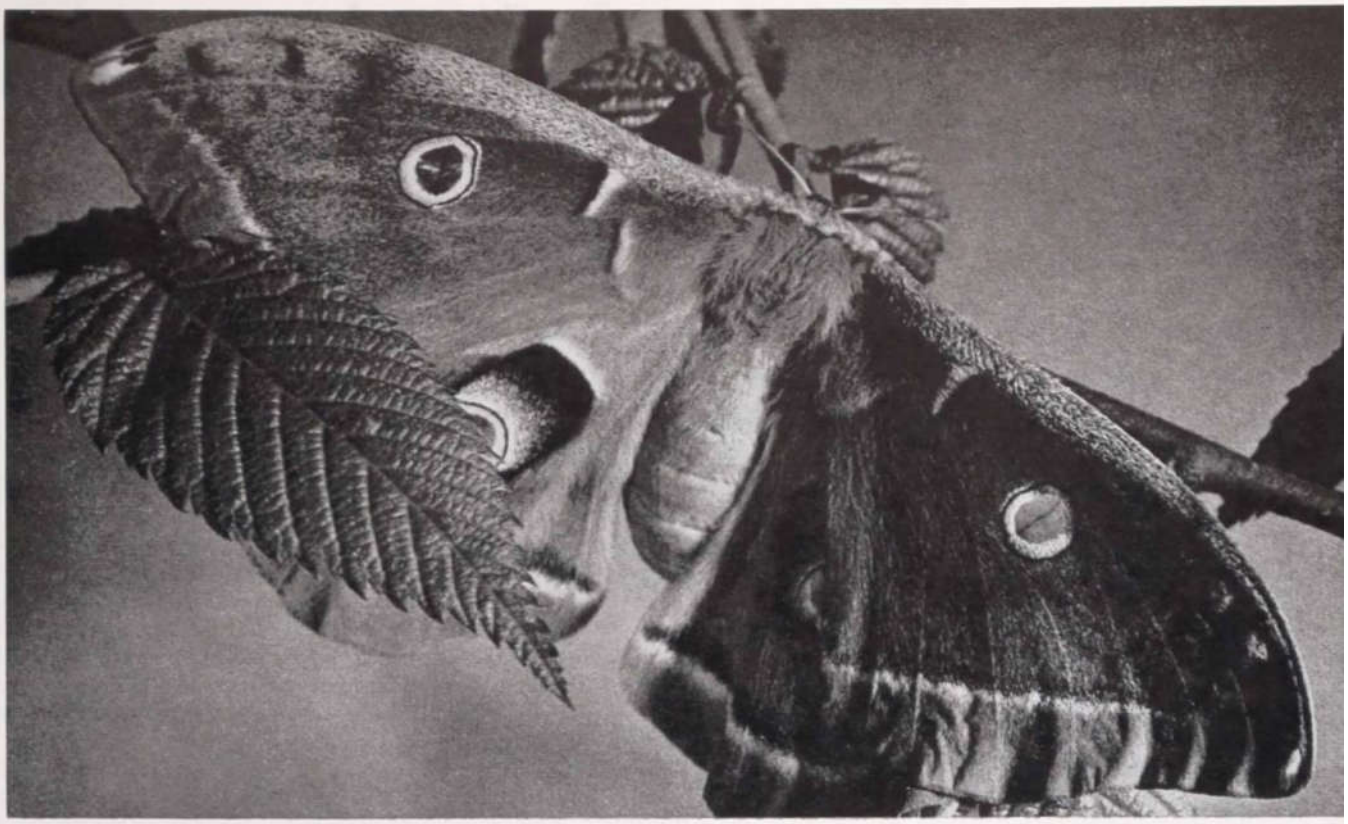


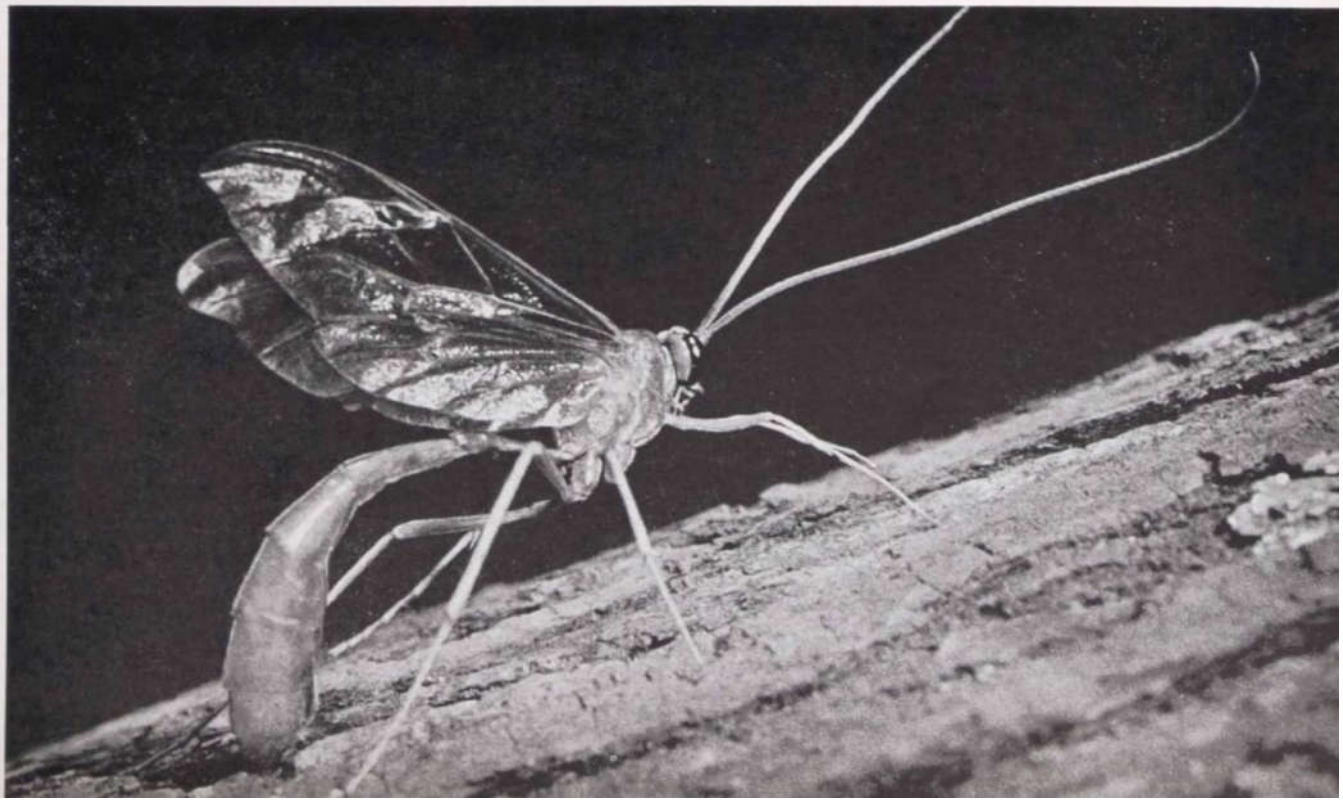
The tiny female wasp-like insect preening its antennae is a parasite of the hawthorn sawfly. It is standing on a sawfly's cocoon from which it has just emerged, it and others of its kind having made their escape through the three round holes. This parasitic insect has not yet been named by scientists.

Some insects are noted for their beauty. Fritillary or silverspot butterflies, similar to this one perched on milkweed blossoms, are found throughout the world. This species, called *cybele*, is familiar to many Canadians.

The polyphemus is a giant North American moth with a wing-span of about five inches. It is born without a mouth and never eats or drinks during its adult existence. Females, such as the one shown here, are capable of laying up to 300 eggs.

Lower: A large ichneumon wasp walking along a branch in search of moth larvae in which she will deposit her eggs. These parasitic wasps aid man by destroying many large caterpillars which attack the foliage of trees.





Canon Sperry's headquarters is Coppermine, whence he makes great journeys by any means from plane to dog-team in the Diocese of the Arctic.

To the Inlanders

When most Eskimos are being drawn into white man's activities in the north it is unusual to hear of a group who turned away from the coastal settlements and their so-called luxuries to return to the simple existence of the Caribou Eskimos.

BY JOHN R. SPERRY

THERE was a time, not many years ago, when the term *Nunamiut* (Inlanders) applied to well over half the people living in the central arctic Coppermine area of Coronation Gulf but this is no longer true. Life on the coast, a little closer to Coppermine, seems more attractive. There is always a market for soapstone carvings, food is in greater variety even if harder to get, and some help can be obtained in times of scarcity or sickness. In 1953, when still a great number of families spent nearly all their time inland, the caribou failed to migrate along their usual routes leaving the people in a sorry plight. The late fall of that year saw a pitiful trek of hungry people struggling to reach the coast. They made it all right, with their few starving dogs, and, in the minds of many, a resolve never to risk missing the caribou again.

Time, however, has a habit of erasing hard times from the minds of all people and in the spring of 1956 some five families from Coppermine decided to try the land again; early last year I made preparations to visit them. They were staying on the edge of a large lake called Tahigafarluk, well over three hundred and fifty sled-miles south-southeast of Coppermine, not far from the tree line. The tree line sweeps southeast from Coppermine in a huge curve in the general direction of Hudson Bay and whilst we at Coppermine are not a day's journey from the first trees, our route to the Inlanders lay entirely across the Barrens.

The man I asked to accompany me on this journey was an Eskimo by the name of Alec Algiak now living on Victoria Island but who for years has lived inland in the very area we wished to visit. Having an intimate knowledge of the country, a good team of dogs, and uncompromising Christian convictions, I found in Alec just as good a combination as I could hope to find in anyone; I was not to be disappointed. Preparations commenced just after the New Year and they were considerable. Unlike every other dog-team trip we make from here up the west side of Victoria Island, the inland trip is bereft of any refuelling bases—the ever-welcoming H B C posts where dog feed, supplies, and facilities for a good wash are always available. Inland is unpredictable and one has to take supplies to last for the journey in and out; personal food supplies, a ten-gallon drum of kerosene, ten sacks of dried fish plus blubber for the dogs, and all the paraphernalia associated with making nightly camps in the Arctic.

There are recognized "trails" from the coast to the inland locations of the Eskimo. They are completely unmarked and used perhaps twice a year on the journey to the coast for supplies—but they are there, and they weave through valleys, between hills and across lakes. Should the traveller get off the "trail" the terrain becomes instantly uncertain; hills appear which are far too steep for the sled and dogs or a wide area of jagged rocks will play havoc with the frozen mud-runners. For short periods, when travelling too early in the mornings, we inadvertently left the "trail" for a time and experienced both these conditions with little pleasure. On the whole, though, all went well and as we travelled south Alec conducted himself like a man who knew just where he was going.

Leaving Coppermine on January 15th we travelled for nine days south enjoying a little more light each day as we met the sun which was still hidden to the folk in Coppermine. It was a lively journey, with Alec giving an excellent commentary on "places of interest"—landmarks where long-dead Eskimo lived, hunted and died; lakes where the caribou cross in summertime and the hunters spear the swimming beasts from their kayaks. We used a small tent for our shelter each night; this can be erected much quicker than an igloo and kept at a much higher temperature during the evening meal. But, when one settles down for

the night, and puts out the primus stove, the night temperatures make one snuggle a lot deeper into the skin sleeping bag and wonder which is the better—tent or snowhouse. They were pleasant evenings in that little tent when, before prayers and sleep, we had the big meal of the day, fed the dogs, and played a game of chess with the battered little pocket chess set I usually carry.

Land travel is far more interesting than travel over the sea-ice, and evidence of life was on every hand. Two days after leaving Coppermine we saw caribou every day in small herds and also their mortal enemies, the wolves. Although somewhat smaller than the timber wolf, the barren grounds wolf can still reach large proportions and one day we saw a magnificent specimen with two young ones shadowing a small caribou herd. Alec expended five 30.30 shells trying to bring it down but it was too fast. Every now and again we came upon a caribou carcass lying in the snow, mute witness of another slaughter.

On the seventh day we skirted Point Lake and saw to the southwest the black fingers of the first trees and we knew that the people would not be very far away. Just where they were located at that time Alec did not know but he knew that they made frequent trips to the trees for fuel; we were to look, then, for a fresh trail with twigs scattered here and there—and that is exactly what we found on the morning of the ninth day when the weather was developing into a full scale "blow" with visibility down to three feet beyond the lead dog. However, we had a fresh trail and after clinging to it tenaciously for three hours we arrived at the goal of our journey, the Inlanders; five little dwellings, about fifty dogs, and the people. Owing to the weather we were almost on top of them before we were seen and then the excited yelping of the dogs, ours and theirs, brought the people tumbling out of their homes to meet their missionary and his man. To people who had been entirely cut off from their friends for so long this was a supreme moment, and we caught the infection of it.

Near Coppermine these Eskimos wear imported fabrics though they still use a caribou-skin tent. Don Blair

For the following four days we stayed with these inland people, the caribou hunters, and saw again how utterly dependent they are upon this beast. By the time we had arrived the people had long exhausted their supply of trade foods with the exception of a little tea. But if there is caribou little else seems to matter. Unlike the Eskimos to the north of Coppermine parish, beyond Holman Island, these people prefer tents to igloos. These, of course, are made of caribou skins on a wooden frame and well banked with snow. They are better fitted to endure the heat from the wood fires than would be a house of snow. From the

In a skin tent, guests smoke while the tea cools. The child is in bed. The clock is ornamental rather than useful. *J. H. Webster*

caribou then come the dwellings, skins for all types of clothing, bedding, and footwear; backfat for the lamps, and sinews for sewing thread; and meat in every form, frozen, cooked, dried; tongues, hearts, heads and hindquarters, marrow and backfat, right down to the warble larvae which, from a freshly killed beast, are considered a delicacy. In an emergency, a folded skin filled with water will freeze itself into a suitable sled runner when properly shaped, and the summer kayaks are made of caribou skins. There seems no end to the things these Inlanders can do with caribou; they provide an education in ingenuity.

The days we spent with them were filled with activity mostly limited to the confines of the largest home; it became a "Church" for some part of each day, where services, a baptism, and a wedding were celebrated. This, naturally, was the whole purpose of my trip but our fellowship together included a good deal of listening on my part as well as talking. It seemed to me that prolonged isolation turned everyone into an excellent storyteller and bit by bit the previous summer and fall were fitted together and re-lived. It had been a good year, with plenty of food and no sickness. But what of the outside world? they wanted to know. Were the white people still fighting each other "like dogs"? (Not spoken with disrespect but with the directness the subject seemed to demand.) "It is because there are too many of them," another added.

The main caribou migration had been right on time. This is the most important part of the whole year for the people. During the comparatively short period when the herd is making its way from the northeast the hunters, both men and women, endeavour to kill enough to assure them their main food supply for many months. And killing is only part of the work. There is the skinning and cutting up of meat for the drying racks, caching and general endeavour to preserve the meat from the flies and the smaller carnivorous animals. Dried meat, then, will be the main standby, but fresh meat being in constant demand, attempts are made to have some on hand throughout the summer and fall. One method is to anchor a whole caribou beneath the waters of a fast-flowing river, a practice which will keep the meat comparatively fresh, but the more popular method is to keep hunting for fresh meat throughout most seasons of the year. After the main herds have gone, smaller herds stay in the general vicinity, making fall and winter hunts possible, though on a much smaller scale. However, once the main hunt has been made, and the essential supplies of dried meat safely cached away, the inland Eskimos can settle down to a winter assured of the immediate future in a way which the coastal people never can. Many of them have plenty of time for trapping foxes, both white and red, and the much-prized wolverine. Once a week or so they will go off about fifteen miles to bring back a load of wood. By Eskimo standards it can be an extremely comfortable and secure way of life.

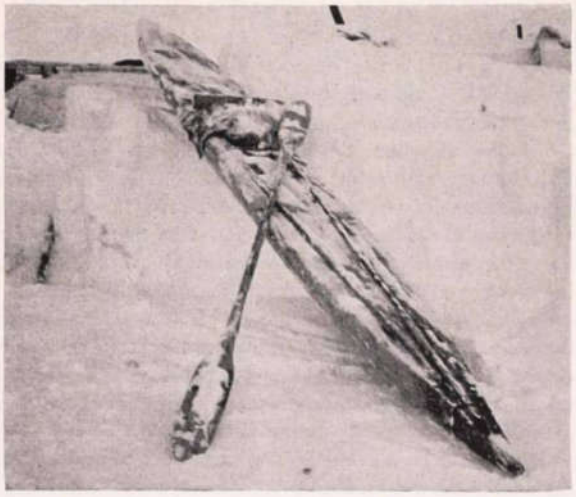
When Alec and I left for the long trip home our load was almost as heavy as it had been when first we left Coppermine. A number of summer caribou skins accounted for this—the type of skin necessary for clothing—and we found

An Inlander returning from a trip to the trees to gather firewood. D. B. Marsh

The tattooed woman slices off a morsel of caribou with her ulu (semicircular knife). Richard Harrington

ourselves loaded with gifts for ourselves and for other coastal people. It was a valuable cargo for a good clothing outfit of new skins is still all-important to Eskimo hunters everywhere and the supplies of this commodity dwindle each year. However, whilst the Arctic stays as cold as it does, and until scientifically-tested arctic clothing comes within reach of the average Eskimo's pocket, caribou skins will continue to maintain their importance. In bringing this commodity to the trading posts, the inland Eskimos are making a valuable contribution to their fellow northerners everywhere.

As we journeyed back home we faced a head wind every day. For three days this wind developed into a blow of such proportions that we could do little but camp and wait for it to stop. To conserve fuel we lay in the unheated tent in our sleeping bags, the hard snow bed playing havoc with each vertebra, making us long for some exercise; the chessmen at least had more of this than usual! The dog-feed situation did not improve with the delay and on the last day the dogs had to be satisfied with a few scraps. The storm had left a great deal of soft snow in the valleys reducing progress to a slow laborious plod, every step sinking, at times, to knee depth. On the eight-hundred-mile journey, we must have walked four hundred through soft snow. But we plodded on, inspired by the thoughts of the nearness of home and the happy memories of our visit to the people of the land. We were still seeing caribou each day, moving, as always, upwind to keep as far ahead of the wolves as possible but, unknowingly, nearing the coast



The kayak, its light frame covered with caribou skin, is used inland in the summer. J. H. Webster

with its different dangers. When we reached Coppermine we told the news of the nearing caribou. Within a week nearly every male had left Coppermine to try his luck and almost all succeeded. In this way the inland trip was a double success for not only had we the pleasure of sharing the lives of the Inlanders for a few days, but we were able, by carrying the news of the caribou, to enable our Coppermine friends to share the delights of the Caribou People. ◆

Mr. Brun is curator of maps at the William L. Clements Library of the University of Michigan.

DOBBS AND THE PASSAGE

BY CHRISTIAN BRUN

DURING its early history, the Hudson's Bay Company conducted its trading from the forts and factories that it built along the shores of Hudson Bay. Little was known of the interior or of the Indians who came in answer to the appeal of British trading goods to dispose of their season's catch of furs. This situation might have existed for an even longer time if it had not been for the interest of Arthur Dobbs, a wealthy, energetic Irish landowner, and his intense and ambitious dream of a Northwest Passage. To Dobbs, who was to become one of the most successful and respected governors of the crown colony of North Carolina, the path to national and personal wealth and glory lay along the fabled Road to Cathay. This, he felt, could be discovered and secured by the lifting of the monopoly held by the Hudson's Bay Company upon the vast northern region which not only, allegedly, contained the Passage but also, countless opportunities for trade and development.

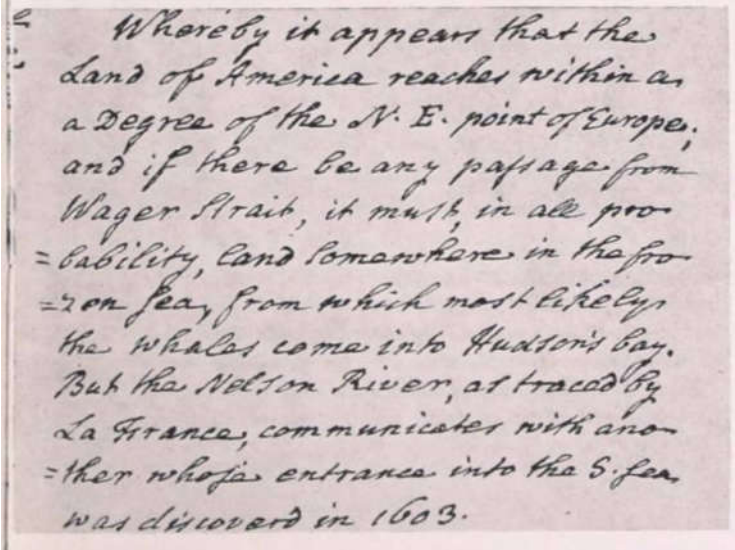
The problematical existence of a Northwest Passage was a magnet that had drawn many an adventurer, amateur and professional, before the eighteenth century. While the solution was long delayed, the search was of great aid to the exploration and economic development of the North American continent. The potential riches of the trade with the Orient combined with the actual returns of the expanding fur trade made a lucrative picture indeed.

Arthur Dobbs, writer and member of the Irish House of Commons, sought for a period of almost nineteen years, from 1730 to 1749, to succeed in his aims of discovering the Passage and of eliminating the monopoly of the Company. His proddings had results which ranged in chronological order from a Hudson's Bay Company sponsored expedition to the northern reaches of Hudson Bay in 1737 to the parliamentary inquiry which returned a full vindication of the policies of the Company in April 1749.

The most famous of the results of Dobbs' endeavours was the voyage of Captain Christopher Middleton in the sloop *Furnace* (accompanied by the pink *Discovery*) during the years 1741-42. The expedition which was carried out in vessels provided by the Admiralty, but in which Dobbs and some of his friends invested heavily, left England in May 1741. After wintering near Churchill River in Hudson Bay, they proceeded north the next summer, discovering Wager Bay and Cape Dobbs and going farther north up the west coast than any of the previous explorations. Captain Middleton was turned back by the ice at Repulse Bay and sailed home to England in September of 1742. In his report on the voyage he stated that the possible entrance of the Passage which had been reported between the 65th and 66th degree latitudes was actually the outlet of a large river, and that the pull of tides in the bay was from the east (and the Atlantic Ocean) and not the north

After his attempt to break the power of the Hudson's Bay Company failed, Arthur Dobbs was appointed royal Governor of North Carolina in 1754, where he served until 1765. *Duke University Library*

Part of the foreword written by Walter Bowman, friend of Dobbs, in his volume of pamphlets on the Northwest Passage dispute. *William L. Clements Library*


Whereby it appears that the
Land of America reaches within a
a Degree of the N. E. point of Europe,
and if there be any passage from
Wager Strait, it must, in all pro-
=bability, Land somewhere in the fro-
=zen Sea, from which most likely
the Whales come into Hudson's Bay.
But the Nelson River, as traced by
La France, communicates with ano-
=ther whose entrance into the S. Sea
was discovered in 1603.

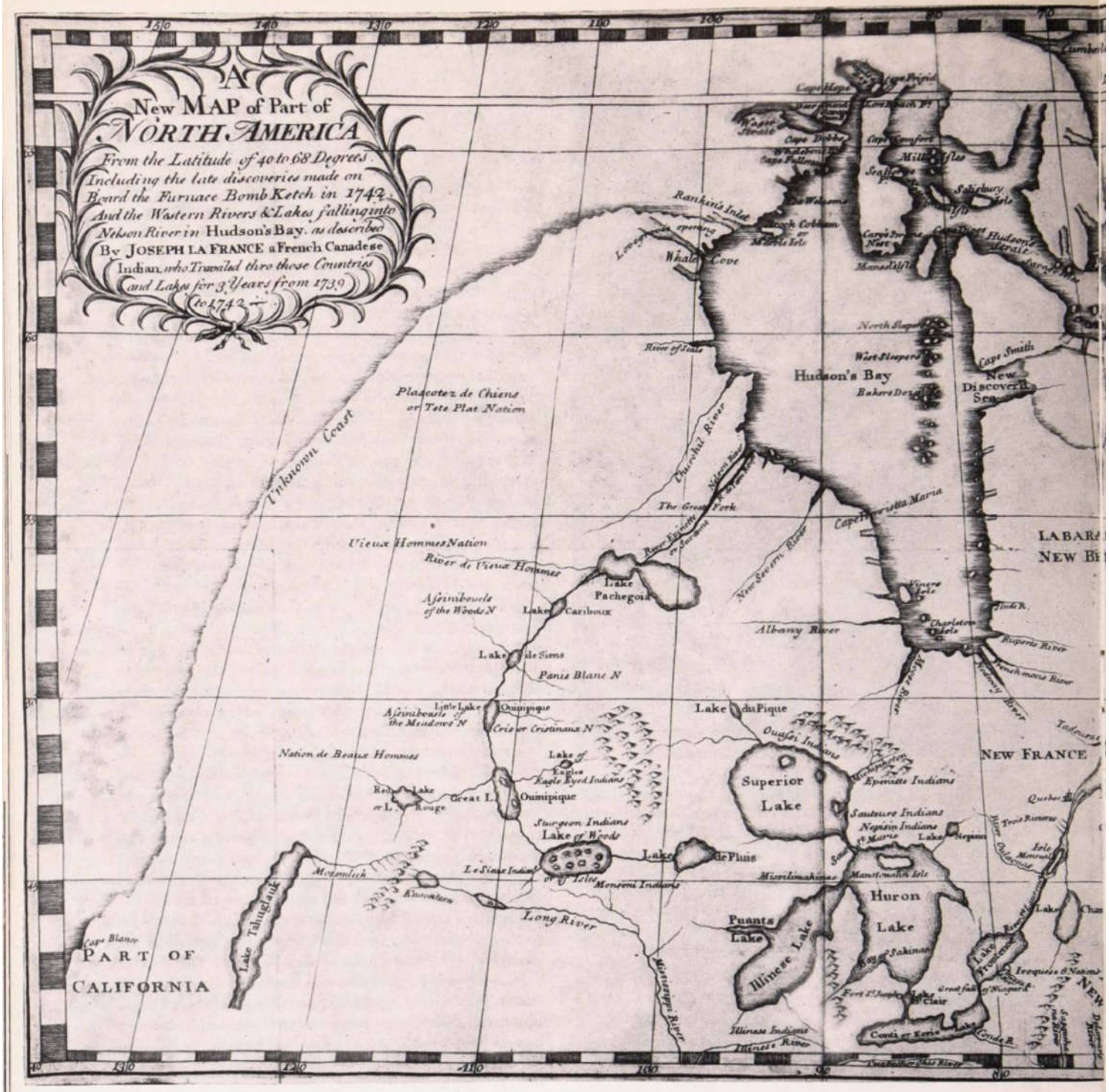
as Dobbs hoped. The captain's conclusion from his study of his own findings combined with his knowledge of the work of previous explorations was that no Passage existed, at least from Hudson Bay.

These findings of Captain Middleton were at first accepted and then, due to what he felt was deliberate falsification inspired by trade rivalries, completely rejected by Arthur Dobbs. Thereupon followed a very bitter exchange of charges and counter charges, Middleton answering Dobbs's complaints to the Admiralty with his pamphlet: *Vindication of the conduct of Captain Christopher Middleton* (London, 1743). This was answered by Dobbs in his *Remarks on Capt. Middleton's defence* (London, 1744). The dispute saw the publication of twelve books and pamphlets—a pamphlet war in the best tradition. Captain Middleton was greatly hampered in his career by the accusations of Dobbs, though in time his findings were accepted as substantially correct by other arctic explorers. Arthur Dobbs devoted himself to other subjects after 1750, when the Hudson's Bay Company's policies had been vindicated. His appointment as Governor of North Carolina was made in 1754.

While Dobbs was greatly interested in the Passage he was also interested in the economic potential of the region that lay to the west of Hudson Bay and he was especially severe in his criticism of the Hudson's Bay Company for their failure to exploit it more fully. Some of this feeling, of course, was motivated by his desire to establish his own monopoly upon the region, but aside from this his ideas were very much in line with the mercantilist thinking of the eighteenth century. The power of the French, the ruggedness of terrain, the difficulties of getting canoes and canoemen, were some of the practical factors which actually slowed the British entry into the wilderness. Arthur Dobbs did make a significant contribution to the knowledge of this region, however, in a volume which formed a part of the dispute with Middleton: *An account of the countries adjoining to Hudson's Bay* (London, 1744).

In this book he describes the lands and the peoples of this region, based partially on his reading of French sources but mainly on his interviews with a French half-breed named Joseph la France who had been brought to England by Captain George Spurrell on his return voyage from Hudson Bay in 1742*. The book is regarded as one of the first detailed, authoritative descriptions of this large area. The Joseph la France who provided Arthur Dobbs with the material on this heretofore largely unknown region was a Canadian trapper, born at Michilimackinac, who had traded in furs until he had been arrested and his furs confiscated by the French Governor-General. With a price on his head, he had then set out for Hudson Bay and Old

*Cross-examined at the parliamentary enquiry of 1749, Spurrell stated that la France's narrative did not agree with what he had said in conversation and added: "He was an ignorant man . . . knew nothing of figures." —Ed.



France by a route from Lake Superior westward to Lake Winnipeg and then north by the Nelson River to Fort York. This journey had taken him three years during which time he had lived, fished and hunted with the various tribes along his route. He had, of course, as a trapper and trader noted the game and the vegetation as well as the topography of the region he was travelling through. In the hands of an avid interrogator such as Arthur Dobbs he was able to make a noteworthy contribution to the knowledge of the Canadian West.

With this volume there is also a map: "A new map of part of North America from the latitude of 40 to 68

The map of 1744 showing part of North America based on Joseph la France's description. From the original in the William L. Clements Library at Ann Arbor, Michigan.

degrees . . . (London, 1744)" and the author is given as "Joseph la France a French Canadese Indian." Though the map has been severely criticized for its inaccuracy, it is still interesting as an illustration of the journey of la France and his concept of the lands he saw and travelled through.

A very interesting story of the creation of this map comes from a friend of Arthur Dobbs, Walter Bowman, an eighteenth-century antiquary, collector, and man of letters. He gives the account in the manuscript foreword he has inserted in his bound volume of three of the pamphlets of the dispute between Dobbs and Middleton, which is now in the collections of the William L. Clements Library at the University of Michigan (in Ann Arbor). He writes as follows:

A new map of Part of North America, from Lat: 40° to 68°. including the Discoverys made on board the Furnace Bomb-Ketch in 1742, and the Western part of Hudson's bay, as described by Joseph La France in 1743. The Governor of Canada having publisht a Reward on the head of this man, for Contreband Trade, He escaped in a Canoe to the native Indians, whose Language he Spoke, his mother being one of them; and from Lake to Lake he accompanied them in Beavor hunting, 'till by a River they came into Hudson's Bay, and carried their merchandise to Fort-nelson. As he durst not return, he got a passage to Europe in the Vessel Furnace in order to goe to Old France: But in Town [London] picking him up on Capt. Middleton's Recommendation for Some months I boarded and fed him at 7 Shil. a week, 'till M[r] Dobbs should come over from the north of Ireland; as his Knowledge of the Language would render him an usefull man in any further attempt to Discover the passage. On M[r] Dobbs's arrival, he gave this Description in my Dineing Room at the Golden fleece in New Bondstreet, when on the floor we chalkt out this map, 'till he was Satisfied it corresponded to the Idea of his Travels. M[r] Dobbs, by being agent at Lisburn for the E[arl]. of Hertford during his minority, was very well known to his Guardian S[r] R[obert]. Walpole; and his friend S[r] Charles Wager first Lord of the Admiralty, incourageing the Discovery, afterwards took care of this man, but he Soon died aboard a Guard ship at Chatham, of a fever & ague, & lived not to goe again with Capt. Ellis*, who has also given us his Voyage into those parts.

. . . On this Dispute, it was proposed to breake the Hudson's Bay Company, as a publicke nuisance; but they were preserved by S[r] I. Bernard, who labourd to lay open the Turkey Co[y], for reasons more easily conjectured than known.

Joseph la France gave no answer to the question of the existence of the Northwest Passage. But through his map and the knowledge he imparted to the impassioned Arthur Dobbs he contributed more than he knew to Canadian history and the study of its lands and peoples. Once the rivalries with the French for domination of the Canadian wilderness and its resources were settled, the Hudson's Bay Company did penetrate the interior, spurred on by keen competition from the Montreal traders. The Northwest Passage was sought for at least a half century more but the dream of Arthur Dobbs had to wait for its fulfilment until the early years of our own century and Roald Amundsen. The true Passage, ice choked and difficult to an extreme, was not at all like the one he had hoped for. ◆

*Henry Ellis, author of *A Voyage to Hudson's Bay by the* Dobbs Galley *and* California, London, 1748.

Professors Peeps of the department of architecture at the University of British Columbia was consulting architect in the partial reconstruction by the federal and provincial governments of Fort Langley, which was officially opened in July.

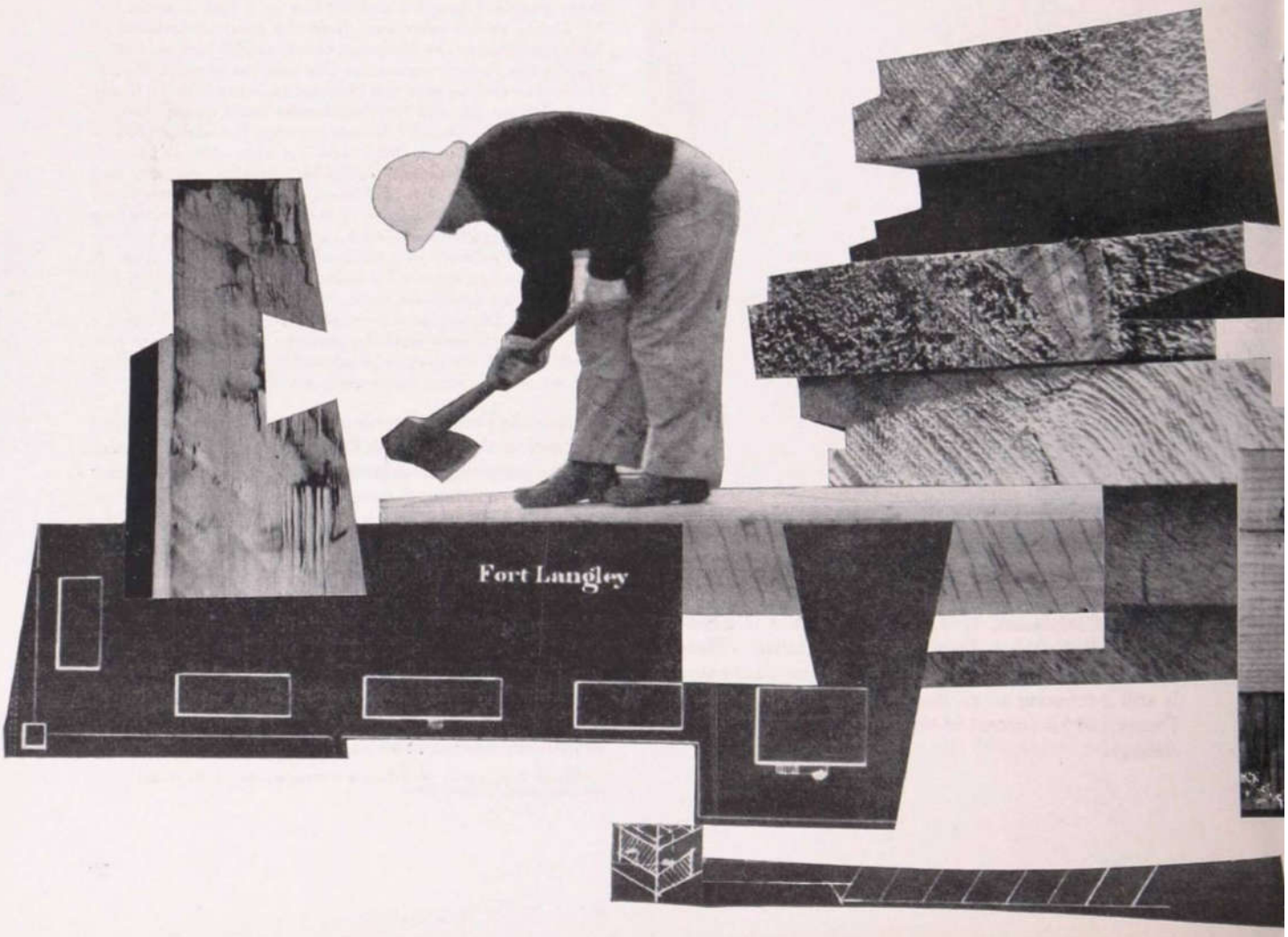
IT has been very properly stated that, from the moment of the proclamation of British Columbia as a colony from Fort Langley on that drear and drizzly day, Friday 19th November 1858, the brief glory of the fort began to wane. Certainly, the movement, early in 1859, of the new capital to Queensborough, later to be called New Westminster, did little to encourage the maintenance of the old buildings. It is recorded that, by 1864, the palisade was being dismantled and the buildings being allowed to fall into disrepair. In 1872, the officers' quarters, which had been the scene of the colony's creation, had become so unsafe as to necessitate its destruction.

Perhaps one may feel that, in this latter gesture, the curtains had been closed on the old Hudson's Bay Company fort but this was not entirely the case. One building was to remain and, in 1925, the Dominion Historic Sites and Monuments Board accepted custody of the building with one acre of land and erected a cairn and tablet there.

So was the original spark kept alive throughout the years, its significance becoming the more apparent as the province grew until, in 1953, eyes were to be turned again to this modest white building, open on Wednesdays and week-ends, standing in a gentle landscape.

This tale is of an attempted re-creation in part that has just begun. The words are used advisedly. Its material parts lay embodied in an array of blueprints, correspondence, photographs, technical data, field sketches and scribbled notes. It would seem proper that one should look to these, to sift and to organize, to mould from them a wholly coherent picture of Fort Langley as it stood some 100 years ago.

To attempt to do so would be superficial. They capture only by word or drawing, no matter how accurately, the purely physical aspects of fabric or structure and at best present a picture of reconstruction, empty, cold, impartial and impersonal.



FORT LANGLEY IN RE-CREATION

BY J. CALDER PEEPS

To try to wrest from them a picture of *total* reconstruction would be a severely limited over-simplification for, like all good research work, they represent only a stopping point along a line of enquiry and are radically incomplete. Commencing some long while ago, they merely form the adequate basis for reconstruction little further than the extent contemplated at present.

From an architectural viewpoint, to talk of historical reconstruction and its meaning, the real problems underlying it and, in a sense, some of the problems which it finally poses, one must detach oneself for a moment from the immediately tangible in order to reflect on broader issues than the buildings themselves.

When men (and indeed at Langley, one supposes, women) build to house their cherished and trivial possessions, to enclose protectively and privately their labours and loves, they are, in a simple yet magnificent way,

entering into a bond with nature. Essentially, through their hands and ingenuity, they are creating or re-creating a particular piece of environment shaped for their own purposes but, nonetheless, only a refashioning of the world about them. The extent to which the immediate environment poses the major problems and the extent to which they are dependent upon its resources will be reflected in the finally created form.

Here at Langley a little world was born out of and from the landscape, a world measuring, tidily and precisely, 250 by 675 feet and enclosing within its almost rectangular periphery, a microcosm of the lives of a handful of people, some 13 buildings seated selectively upon the brow of a hill, a world differing only in its orderly form but not in its substance from the land about it.

So, it would be to the landscape that one should look for first clues and, indeed, it may be first to the landscape that one should give heed in bringing to life again this earlier state.

Yet again, one must consider that the organic landscape itself does not give freely all of its clues. Fundamentally unchanging in its basic form, the original modification of its face which began then has continued unceasingly so that it can now only hint at the manner in which it must have acted as background and foreground. Only part of the truth remains.

But, most particularly, one must bear in mind that, without the people, the buildings are nothing, are empty shells which we must populate and activate by our own contemporary imaginations—but this guardedly for the process is subjective, romantic and can be maudlin.

In this sense then, any attempt wholly and simply focussed from the outset upon material reconstruction and measured wholly and simply in these terms would be as valueless as it was limited by the cold, irrefutable evidence supporting it.

Architecturally Fort Langley, like the many other H B C forts expeditiously created, was of little merit to sophisticated eyes. Its basic form of timber construction was standard, the size and location and the use of its buildings to a large degree arbitrary, conditioned only by a recent and rule-of-thumb experience. These were simple buildings lacking the delicate turn of phrase or, perhaps, the latest architectural *mot juste* but, nonetheless, in an unsentimental way, speaking with a direct and honest vocabulary whose robustness was matched only by its bluntness and, on occasions, by its vulgarity.

There could have been little reason for recording the particular architectural characteristics for their own sakes. These buildings were there to serve and, having served, to fall into a quick-forgotten decline. Perhaps, at best, some accurate record may be made of their number and,

The only original building at Fort Langley, which was renovated and used as a museum.
J. C. Peeps

The old building at an earlier stage, before it was taken over by the Historic Sites and Monuments Board.

with luck, of their disposition but hardly of their ever-changing purpose or, worse, of their interiors. Yet these must have played a very real and a very intimately-loved part in the lives of those they sheltered at a time when "it seemed as though dripping skies had formed a permanent canopy over the land."

This then, was something of the realization of the author in commencing his part of the work, an understanding that no fount of information would spring forth (perhaps it would have been unfortunate had it done so), the warning from the experience of others that written evidence could be dangerous, hearsay worse and artistic evidence licentious.

On the one hand, there was the need for an unremitting pursuit of authentic data, coldly, objectively, above all patiently and, on the other, in the absence of such information, the need for the empathetic projection of oneself back into the real time of Langley to feel intuitively what problems they must have faced and the manner in which they would have dealt with them—with a willing acceptance of the ugliness which such solutions might suggest.

The problem in 1953 was to a large degree academic, concerned as it was with pursuing the general nature of the fort as to its content and disposition of buildings.

Certain sources of information existed, varying in degree of reliability. These included an 1858 sketch of part of the interior by Mallandaine, a photograph of a bastion, an old model, Mr. Joseph Morrison (the fort's last survivor), some metal markers in the ground bearing the word "Palisade" (of unknown origin) and, providentially, the remaining building, recently recapped, reshod and generally resuscitated, but substantially in its original form. There were also some very misleading illustrations.

The following year saw renewed interest and the matter ceased to be of purely academic importance. Now the problem was to be more precisely of a constructional investigation with reference to both palisade and buildings.

As to the first, the constructional answer was simple and had ample precedent. Stripped cedar logs about 18 inches in diameter and 17 feet in height were embedded about three feet in the earth, their ends sometimes charred against rot and, to avoid the disadvantages of taper, alternately arranged butt and tip down, their abutting faces broad-axed for close jointing. In turn, a pair of heavy horizontal girths about 20 feet long were housed into the internal face, fastened by stout, tapered pegs to each log and, at their ends, tenoned into mortises in larger posts which had been more deeply embedded. Without any particular defensive need, the upper surface of the palisade was not spiked but simply weathered to shed water.

It was also believed that set into the palisade were four sets of double gates of split logs, similarly ledged, of the

Still earlier—the existing building in 1894. Connected by a pen in front of which sheep are grazing is the blacksmith's shop
B.C. Archives

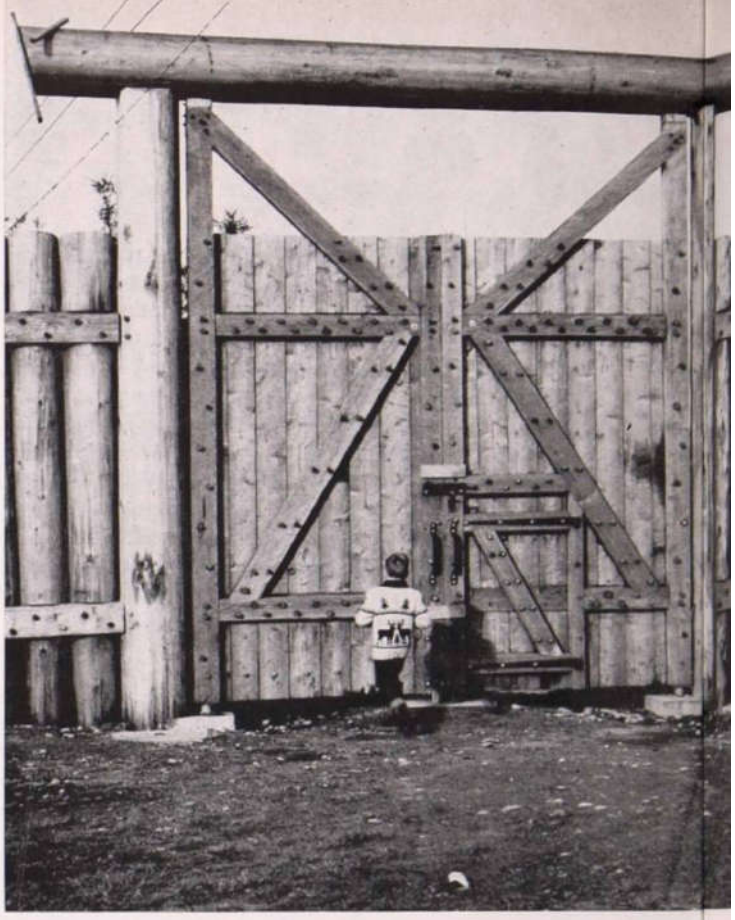
same height and jointly about 14 feet in width. Into one of these was set a smaller wicket gate allowing easier individual use. It seemed hardly possible to hang gates of such a tremendous weight simply by metal hinges and more likely that they were pivoted by their side members, the foot resting in stone and the head housed in a horizontal log spanning between massive side posts as at Fort Nisqually. Paradoxically, this form of palisade construction was one subject to constant deterioration and the need for replacement yet it seemed that only from possible fragments held for a century in the earth could any accurate information be obtained about its location.

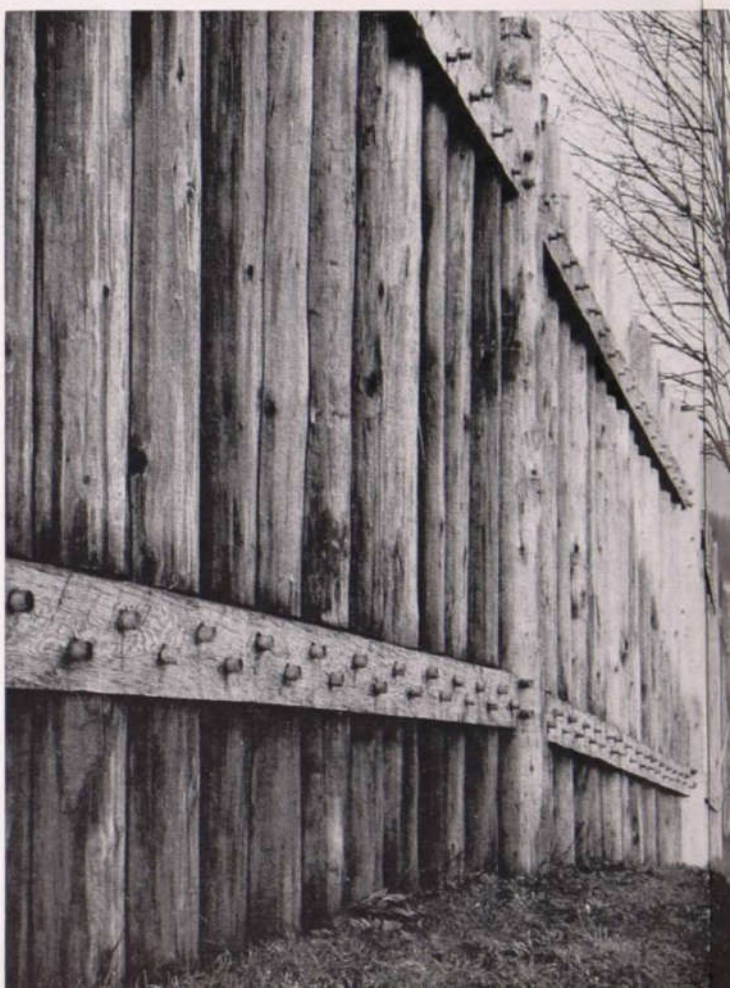
Now, the existing two-storeyed building became the essential point of focus and showed itself, despite amendment, to follow the typical *poteaux-sur-sole* form common in other forts and to be of western red cedar throughout. (This form of construction has been well described by Marius Barbeau in *The Beaver* of December 1945.) Little light could have penetrated the upper small-windowed and musket-apertured walls but the winter winds must have done so and perhaps the occasional bird found a measure of comfort amongst the unceilinged roof members had it come upon one of the fist-sized openings which came as the unseasoned timbers shrank and teetered drunkenly down and askew within their channels.

One can suppose that it was principally the stout whipsawn and adzed planks, three inches thick and twelve inches broad, pegged to the floor beams, that were the main sustaining elements in the upper floors. One descended precipitously by way of a steep, open-treated stair to the lower floor where at least some cheer came from the larger casements, the pot-bellied stove and, for a while, the sweet-smelling cedar. Undoubtedly, against this iron, black-hot monster both the garrulous and the meditative must have spat sizzlingly from tilted handyman's chairs, elbows rested on heavy-topped, square-legged thumping tables and thoughtful eyes in their rarer moments of relaxation must have rested on the exposed beams, both strength and all-accommodating hanging space, dimly candle and coal-oil lit, during the grey Langley twilights and black Langley nights.

Two important buildings under reconstruction were in certain respects treated with an aesthetic eye.

One of these is of greatest importance, the officers' quarters from whose main hall the proclamation was to be read. Fortunately, as to the exterior, two good sources of information existed. The first, the Mallandaine sketch showing the building, full, two-storeyed, of ample six-bay breadth, about 70 feet wide and 33 feet deep, capped by a massive hipped roof. Unlike the others it ran continuously without stone pads from the earth, its central entry some





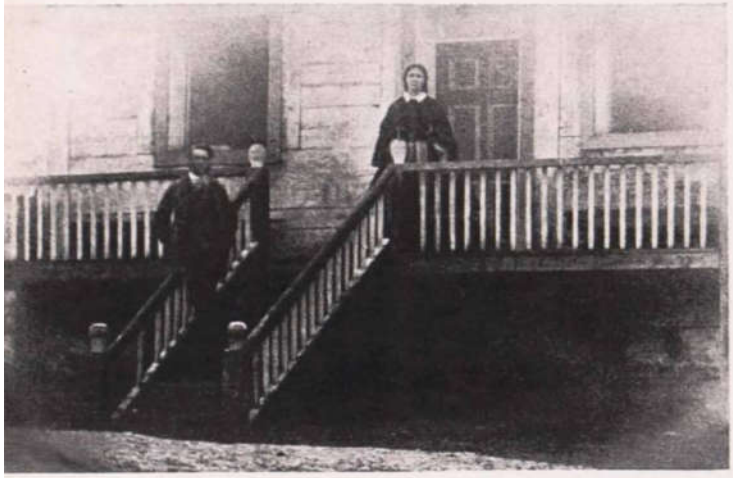
Left, top:
The massive double gates set into the palisade, from the interior. The wicket gives access for people without opening the heavy gates which pivot at the sides.
S. E. Read

Above, *right:*
The upper floor of the reconstructed No. 3 building showing the small casement windows and unceilinged roof which were typical.
S. E. Read

Left:
Part of the western palisade, from the inside. The 17-foot stripped cedar logs are sunk three feet into the ground. The heavy horizontal timbers are fastened to each log by tapered pegs.
S. E. Read

four feet above the ground, approached by simple steps. The second was a photograph of W. H. Newton and his wife standing on the steps and reputed to have been taken in 1858. In the light of more recent evidence, this may have been taken later for, unlike the Mallandaine drawing, it shows a short verandah in addition to the steps and an elegantly panelled door, which was undoubtedly eagerly awaited from Victoria. At all events, the exterior here is white and, having regard to the particular importance of the building, one would reasonably assume that it had always been so.

Here also, as with the other buildings, knowledge of the internal layout was impossible to obtain. It was hearsay that the main floor, resting over the potato-cellar in which Dr. Tolmie sought refuge from the groaning wind-buffeted frame in 1872, contained the main dining hall for the fort's officers, the factor's parlour, office and bedroom and, probably, also a bedroom for the clerk. The kitchen was



W. H. Newton and his wife in front of the officers' quarters. He was at the Fort from 1858 to 1860 and again in 1874.

reputedly separate from and to the rear of the building where it had access by a secondary door.

The upper floor was given over in its entirety to sleeping space for the visiting officers.

The second building showing aesthetic consideration is, oddly, the bastion. Here, two-storeyed, 15 feet square, it had at the peak of its roof a timber finial or pinnacle some 6 feet in height and, whilst of rudimentary design, nevertheless consciously conceived. One wonders what sense of authority prompted this significant silhouette and, indeed, what respect it must have drawn from the native Indians eying it across the broad and muddy breadth of the river.

To this extent only, moving patiently and sometimes painfully slowly back into the panorama of Fort Langley, did its vague details and personality gradually become clearer like a forgotten face in which one remembers the smile but rarely the shape of the lips.

The moment of urgency and critical consideration came in 1956 on the decision to commence partial reconstruction of the fort and, with it, came two particular considerations. The first of these was the realization that the true story of Fort Langley was written largely in the ground and that, in the absence of authentic documentary evidence, it would only be by excavation that part of it could be revealed. The second was that one was standing, as it were, astride time from the present casting back into the past in order to create something for the future having particular regard for the fact that, wholly authentic, the reconstructed buildings would collapse as ignominiously but rather more expensively than they had done before.

To deal with the first: the program was necessarily limited in time and intent being aimed only at locating the palisade line. Raised above the earth, it seemed proper to assume that the fallen timbers and the pad-stones of the buildings would have been dragged clear of the ploughshares and that only general evidence of locations would

Edward Mallandaine's sketch of Fort Langley at the end of 1858. The view is from the north, the building on the right being the manager's residence or officers' quarters.
B.C. Archives

be gained by unearthing human impedimenta discarded or dropped in passing. As to the palisade, however, despite reports that this had been dismantled, it was reasoned that, deteriorating as the posts would be at ground line, no one would have gone to the trouble of wresting their decayed roots from the earth. Allowing for a certain further deterioration and some damage one might hope at least to find fragments remaining. So it proved to be; 44 positive findings were made.

These posts appeared to have been fully-round, varying in present condition from a black mud squelching between one's fingers at the grasp to a dried out but solid form. This variation was undoubtedly due to the double conditions of highly variable ground nature and to the replacement of rotted posts which was constantly necessary. Under test at the University of British Columbia, they were shown all to be of western red cedar.

Generally, no significant archaeological findings were made although many tiny fragments of china and glass were unearthed together with a large number of wrought-iron cut nails. One area, however, was fruitful. This was adjoining the northeastern corner where many pieces of scrap iron were found giving substance to the idea that the first building here was the blacksmith's shop.

It was, therefore, a tremendous stroke of luck when Mr. Willard Ireland, Provincial Librarian, unearthed from the Archives a sheaf of field survey notes by one Sgt. McColl of the Royal Engineers, being a survey of the H B C claims at Langley, sketched and dimensioned and bearing the date, 10th October 1862. More providentially and almost sardonically included with them was a neat and full layout of the fort itself complete with scale.

Particularly, it confirmed the basic accuracy of the Mallandaine sketch and showed that, instead of the old model's seventeen buildings, there were only some thirteen in all, the officers' quarters at the south with kitchen at rear, five on its east running northwards, four to its west side parallel to the others, with two across the north boundary and three bastions only.

Cryptically and aggravatingly, having offered so much, it named only two of the buildings, the officers' quarters themselves (termed here Manager's Residence) and a sale shop immediately to its east. It was about this latter that James Douglas had written to J. M. Yale on 27th April 1858, "I now send a supply of deals to complete the Fort Langley sale shop and also a person named Daniel Adams who has contracted to do all the work . . .".

At the lower banks to the northwest, some 200 feet away, was the pier and slightly south of that, by McColl but not by Mallandaine, were two large buildings between 80 and 150 feet in length supposed to be the salmon packing houses and across whose memory the Canadian National Railway now thunders.

It was right, therefore, in the decision to begin reconstruction, that haste should be made slowly, within the limitations of what was already known about the structure,

The rebuilt northeast bastion with part of the outside of the palisade. J. C. Peeps

The original northwest bastion, from a photograph taken in 1862. B.C. Archives

One of the sounder stumps of the old palisade that was unearthed by the excavators.
C. Peeps

J. C. Peeps

Number 3 building, nearly completed, shows clearly the post-on-sill method of construction, the whole raised on stone pads as protection from the earth.

and the present state of the area. The past years had seen the quarrying of the southeasterly portion, the Canadian National Railway track had required a steep embankment cutting across the north face, and an intervening road passed through the whole.

In certain respects, some advantage came from the railway cutting for, whilst preventing construction of the trade shop, the northwestern bastion and the building between them together with that length of palisade, it opened the view to the north. Over the river could be seen the stretching flatness and calm of McMillan Island, an Indian reserve, with its delightfully typical little wooden church, dark, steep-pitched and with an elegant spire, set quietly against a backdrop of trees and these, sometimes mistily, against the mountains. On the other hand, the road meant that full advantage could not be taken at this time of the Mallandaine sketch showing clearly the nature of the exterior of the two buildings which stood where the road lies. The quarry was only to limit the palisade and to prevent the building of the southeastern bastion.

For these reasons attention was directed to the erection of the maximum amount of palisading with one pair of approach gates, to the northeastern bastion, to the building immediately opposite to that suggested as a possible warehouse (and named, in doubt, Building No. 3) and, lastly, to the officers' quarters.

Having told the tale so far it is at this point that one senses the anticlimax for, in truth, the foregoing is only in the nature of an introduction. Beyond this one is, to some large extent, concerned with technicalities. The basic problem has been essentially one of determining how, with the potentialities and limitations of contemporary resources in material, labour and financial terms, reconstruction may be authentic without suffering the disintegration which went hand in hand with the original form. Certainly, the Government has shown an outstanding concern to ensure that a truly worthy result should be obtained.

It seemed legitimate that advantage should be taken of contemporary machinery to square the materials rather than to work from the round log on the site and, indeed, as a standard form of construction was used, that prefabrication of parts would be logical. More apparent than real was the anticipated difficulty of obtaining labour able still to use the broad-axe and adze; experience showed that, not only were such men still around and actively interested, but that their accuracy in craftsmanship could be higher than the machinery in which we are inclined to place so much trust.

Fundamentally, the material to be used was western red cedar, easily worked but not the strongest of timbers and, with a record of good resistance to the environment, nevertheless unpredictable in specific performance.

This was to apply particularly to the palisade whose members, with an additional girth for strength, were to be embedded in the earth. Fortunately, contemporary

science has made it possible to inject a resistance into the material against the rigours of the earth. By pressure-preservation, this liberty only was taken with the material. Beyond the hand-craftsmanship, one other liberty—the raising of the near half-ton timbers by machinery in contrast to the time when "as men under Chief Factor James McMillan sweated at building a fort of logs, Indians fired

S. E. Read

Looking north from the fort, across the Fraser River to McMillan Island with its little wooden church, and the mountains beyond.

Craftsmen working with axe and adze to fashion the hand-hewn timbers for the reconstruction. J. C. Peeps

The Fort Langley enclosure from the northeast bastion. The near building is the old structure, now the museum; the far one is the reconstructed No. 3 building. S. E. Read

the forests and the acrid smell of burning foliage seared the lungs of the toilers."

About these buildings, of course, grass will not grow under the steady drip from the roof, Indeed, the grounds must have been a dismal, miry sight. Present proposals call for the verging of the two erected buildings with a local stone gravel, the same material being used to mark out the original foundations of the other buildings with such identity as can be given.

One particular difference stands out in this and it is here that one returns to the opening comments on landscape. Fort Langley was born out of its immediate environment, and so modified its face, but the straight, coniferous timbers no longer exist having been replaced by a smoother gentler, rural profile. Because of this, timbers destined for contemporary use have been dragged from the Fraser and brought back to serve the old fort again. With these the other final and proper gesture is being made by the replanting of coniferous stock about the palisade.

Here, then, is the halting point. Contemporary resources and old materials go patiently hand in hand to breathe life again into this place of our beginnings.

One is left with two thoughts; what those one hundred years from now may think of our actions and, indeed, if they may be contemplating the restoration of a restoration. And what the Indians across the *Stahlo prole* (Fraser River) really thought about those pinnacles set against the leaden sky. ◆

Ethnologist with the Smithsonian Institution, Mr. Ewers planned the modernization of the American Indian and Eskimo exhibits recently completed in the Natural History Building at Washington.

Love Medicine

BY JOHN C. EWERS

THE old time Indian gained his reputation for courage in combat with other men rather than through his prowess in the battle of the sexes. Many brave young warriors who would not hesitate to close with an enemy in deadly hand-to-hand conflict with knives or tomahawks became strangely uncertain and fearful when confronted with an attractive, dark-eyed Indian maiden. Then they needed help. And fortunately help was available not only for the bashful, tongue-tied suitor, but for the more aggressive pursuer whose prospective sweetheart appeared indifferent, or for the married man or woman whose partner's affections had cooled. All those with love troubles could obtain and use love medicines. These medicines were prescribed by specialists and administered secretly. Many happily married Indians could testify to their effectiveness. Furthermore, love medicines had the reputation of being so powerful that resistance to them was almost useless.

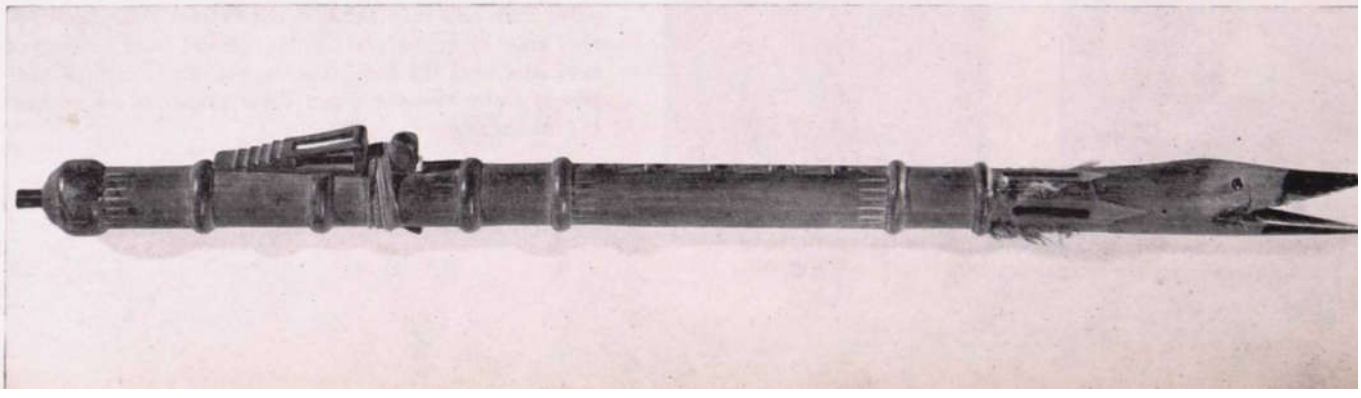
One love medicine which was highly regarded by the Siouan-speaking tribes of the Northern Plains—the Assiniboine, Crow, Mandan and Sioux—was known as elk medicine. It was reputed to be the power exerted by the bull wapiti over the females of his species. The bull travelled alone. He could be seen at times standing on a hill calling in sounds that resembled those made by the Indian end-flute or flageolet. His call seemed to attract the females to him like magic.

An Assiniboine young man who needed love medicine to bolster his courage went to someone of his tribe who was known to have obtained elk power in a dream. He offered this man a horse or other valuable property in return for his help. The possessor of elk power then instructed the young lover in the procedure he must follow to obtain the affection of his loved one. He told the young fellow to bring him his robe. Across the back of it he painted a large likeness of a male wapiti in solid blue. Then he gave the young man a long end-flute made from a straight section of ash wood from which the pith had been reamed out with a red hot iron rod. The likeness of a bird's head was carved at the front of this instrument. In the quiet of his teepee the elk medicine man taught the eager young fellow the music he must play on his flute. Wearing his elk-painted robe and carrying his elk whistle, the lover then set out for the lodge of his sweetheart. When he played elk music outside her lodge she would surely hear it and would come to him just as the female wapiti was attracted by the calling of the bull.

Once a Crow Indian who had been spurned by a young woman retired to the mountains where he fasted and prayed for help in winning her. There he saw a vision of an elk hide on which were painted a female elk standing in front of a male. He returned home, painted an elk hide just as he had seen it in his dream, and with its aid attracted and held the affection of the girl who had rejected him.

Among all the tribes of the Northern Plains the Cree had the highest reputation for the concoction of potent love medicines. One practice attributed to the Cree by their Assiniboine neighbours called for use of a water-filled drum. A woman whose husband had neglected her in favour of a younger girl would place the drum between her legs so that it rested on her toes above the level of the ground. As she drummed she sang love medicine songs. The booming of her drum could be heard a long distance. When her errant husband heard these sounds he would leave his new love and return to her.

Tbe Blackfoot Indians knew love medicine by the name "Cree medicine." They were awed by its power. They did



Ojibwa love charm: carved wooden figures linked with hair, with a packet of love medicine attached.
Smithsonian Institution

not make it themselves but purchased it from specialists among the neighbouring Cree. Actually there were many varieties of Cree medicine prepared by different tribesmen skilled in the concoction and use of love charms.

One Cree practitioner advised his Blackfoot customer to obtain by stealth a hair from his estranged wife's head, wind it around a hair from his own head and place them together in a little buckskin bag containing a sweet-smelling powder. Then his wife, who had returned to her father's lodge, would come back to him.

Another Cree formula called for the making of a birch bark image of a man and another of a woman. Then a stick was dipped into the liquid medicine and was touched to the hearts of both the male and the female figures. This bit of magic was sure to make the absent sweetheart think of her lover and fill her with a strong desire to be in his company.

The plant ingredients employed in Cree love medicines and the methods by which they were prepared were kept secret by the individuals who devised and sold them. Yet we know that botanical substances were frequently employed. Some of these may been the same as certain plant materials in the love medicines of Indian tribes living farther south in the valley of the Missouri. We know that the Omaha Indians referred to the bloodroot as "woman-seeking medicine." A young man of that tribe who rubbed some of the root of this plant on his palm and succeeded in shaking the hand of the girl he desired would find her willing to marry him. Ponca Indian suitors employed the tops of the meadow rue in the same way. Probably the delicate fragrance of this plant favoured its selection. Sometimes an Omaha man rubbed the chewed root of artemesia on his clothes and approached his sweetheart from the windward. The breeze blowing the scent of this medicine toward her would soften her heart toward him.

Pawnee Indians concocted a complex love medicine of the crushed seeds of the sweet-smelling wild columbine and love seed (*Cogswellia daucifolia*), the dried roots of ginseng and the dried roots and flowers of the red lobelia. When hairs from the head of a woman were added to this botanical combination that woman would be unable to resist the charm of the man who employed this medicine.

Great as was the fame of Cree love medicines among neighbouring tribes of Plains Indians, the Cree themselves acknowledged their debt to their neighbours of the forest, the Ojibwa, for their own knowledge of love charms. Certainly the best remembered Ojibwa love medicine formula bore a strong resemblance to the Cree birch bark image. It consisted of two carved wooden figurines each about an inch in height. One represented a man, the other a woman. They were bound together by some of the hair or a small piece of material from the clothing of the person who was to be charmed. The figurines were placed in a little bag along with a small packet of love medicine, commonly the tiny, round seeds of the false gromwell. Sometimes fingernail parings of the beloved were added to the package if it was possible to secure them. These charms were carried by either men or women having difficulties in affairs of the heart. In preparing one of these charms, medicine might be placed on the lips or on the hearts of the little figurines much as the Cree applied love medicine to their birch bark images.

Undoubtedly the most active ingredient in Indian love medicine was the user's profound faith in its potency. Henry Black Tail, an aged Assiniboine, recalled a humorous proof of this fact. In his youth some young men of his tribe availed themselves of a love medicine consisting of a small piece of a certain root wrapped in a bit of buckskin and tied inside a trade thimble where it couldn't be seen. The thimble was suspended from the user's shirt by a buckskin cord. A relative of Henry's, who was a practical joker, made up one of these love charms, but deliberately omitted the magic root. He sold this spurious miracle worker to a friend who had been consistently unlucky in love. Several days later, when he thought the joke had been carried far enough, the seller offered to buy back this impotent thimble. "Oh no," protested his friend. "I'm not selling *this* medicine. It works too well!" ◆

An elk whistle, with which a Sioux lover would lure his sweetheart.
American Museum of Natural History

THE other day I read a book which described Poland just before the last war. The author mentioned the many rivers there which had no bridges for long distances and referred to this as though it were the ultimate sign of primitive living.

In that case we must certainly be prehistoric people up here in the Selkirks of British Columbia, for the shock of finding an honest-to-goodness bridge over our rivers is one we do not often suffer. Now that the loggers are moving in these conditions are changing rapidly, but it is still possible to find rivers in our hinterland—and not so hinter either—which have never been desecrated by anything more civilized than a tree trunk felled across them.

When the Indians were the only inhabitants they usually did not bother to do even that. If they could not canoe across they simply waited for low water and forded the streams. They were free from that sophisticated urge to see the other side of all bodies of water just so they could come back and say they had. When bartering with another tribe or gathering berries across a stream they built canoe-rafts: hollowed-out log canoes lashed together with spruce roots, roots of dogbane, nettle or Indian hemp,

An Indian bridge across Beady Creek, which flows into Dease River in northern British Columbia.

National Museum of Canada

Two logs formed the first bridge over the Gorge in Victoria. Residents of the Fort in 1850 found "not a vestige of civilization beyond the rude bridge . . ."

B.C. Archives

In his book "River for my Sidewalk" Grant Madison writes of his life in a renovated miner's cabin of 1860 in the Selkirks, "one large mountain and half a mile of forest" away from the nearest whistle-stop station.

BY GRANT MADISON

Across the River

with decks of cedar planks laid across them. They had no cattle or sheep which needed an extensive range and each tribe kept pretty much to itself before the white man's trading posts created the first "city slums."

But occasionally they bridged rivers by foot logs; sometimes left just as they were, sometimes with their tops flattened by stone axe work. The more ambitious Indians hewed the timbers out most skilfully, considering their primitive tools. They had adzes, mauls, chisels, hammers, scrapers, but the stone heads of these had to be patiently shaped by cutters which were usually of rock crystal, agate, or sandstone. Then they were lashed to ingeniously cut and slanted wooden handles by rawhide or root thongs.

Remains of other and more ambitious Indian bridges have been found in this mountain land, built without the use of nails or straps. Forked beams were planted into the river and the upper ends passing through each other formed a sort of lock. This structure supported long and

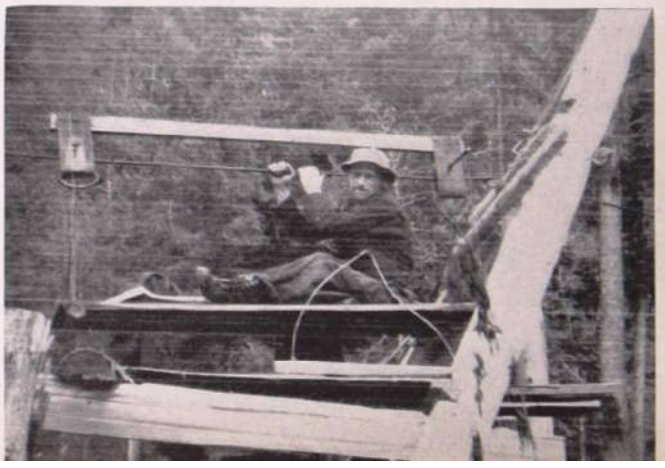
An Indian carries his grandchild across the river on the simplest kind of log bridge
National Museum of Canada

heavy tree trunks, sometimes hollowed, on which one person could pass. Bridge River, which joins the Fraser near Lillooet, received its name because the Indians had built a bridge across its mouth.

Rafts were common Fraser River transportation even in the early days of this century and of these some of the larger Indian canoe-rafts were by far the most interesting and handsome. One I had described to me by an old timer consisted of three 35-foot cedar logs four feet at the butt and hollowed out like troughs. These were squared up and fastened side by side with a huge dowel pin through each end of the boat. The ends sloped up from the water and the raft was boxed in above with heavy, wide hand-hewn planks caulked with spruce gum or pine pitch. Thirty men could get aboard at one time and pole themselves across a river, no matter how wide it was.

The Apaches and Navajos—who are descended from the same great Déné family as some of our British Columbia tribes—have a curious legend about a bridge built over the Rio Grande River in New Mexico. The medicine men were the builders and they constructed the bridge by laying a long parrot's feather over the river from one side and a long magpie's feather from the other. As soon as the plumes met in the middle of the stream people began crossing on this remarkable structure. But jealous medicine men of another tribe began working against the bridge and caused it to overturn. Many people fell into the river and were immediately changed into fishes. For this reason, it is said, some Apaches, Navajos, and Pueblo Indians refuse to eat fish even to this day.

In the Selkirks the trappers and prospectors followed the Indians and their way of crossing over rushing streams was simply to fell a tree which stood at the water's edge. Now you can travel the entire length of most of our rivers without finding such a tree in the right position. I believe I felled the last one on the Teal myself. I flattened the top with my axe and even put up a tree-branch handrail for timid guests. Both ends of the log were lashed to stumps on shore and when the spring freshets or autumn floods arrived I could untie one end and let the current swing my bridge into the bank, where it remained until I could pull it back again at low water. But with this



The passenger on the cage hauls himself along the cable to reach the author's cabin across the Teal River.
Grant Madison

The oldest Indian suspended bridge of the Bulkley canyon near Hazelton, B.C. Its height can be judged by the two men standing on the frozen river bank.
National Museum of Canada

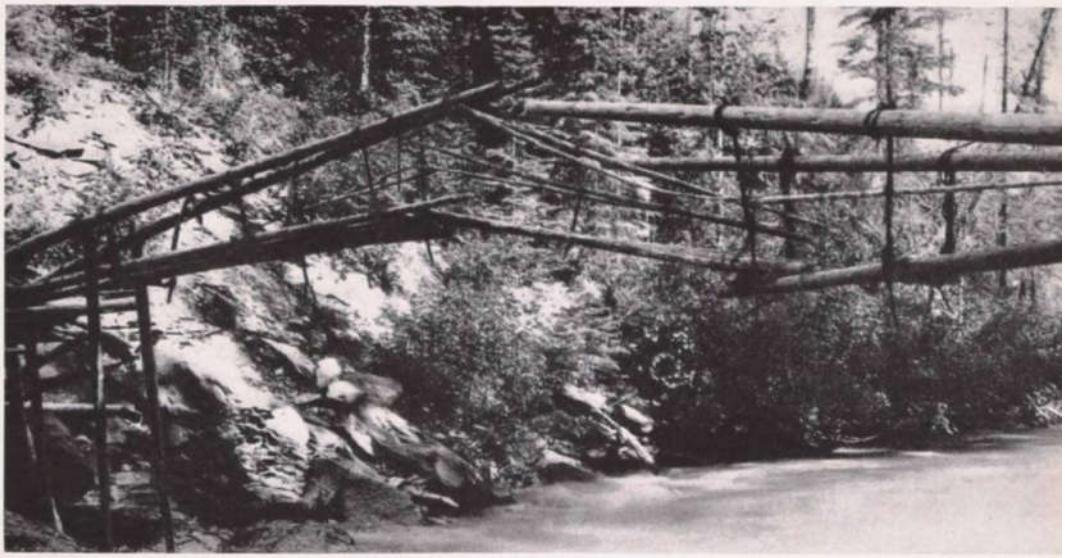
civilized structure in operation I couldn't censor my guests, so one day I cut the bridge loose and watched it head in the general direction of the sea.

The prospectors who lived in my cabin years ago used to raft their supplies across the big pool in the Teal. One chap was bringing a new stove to his wife when the current tipped the raft and the stove slid off. Other miners were to help raise it the next day, but that night there was a cloudburst in the mountains and the river rose four feet. Boulders and tree trunks went hurtling down its spate and with them went the precious stove.

These sudden rises plus the big granite boulders are the reason why government engineers rebuilt one of our bridges summer after summer, only to have it go out each April. First they used long supports and then cement posts, but neither was proof against the mountain stream's strength and wildness. For years after that our only bridge was a pole-log one over a branch of the Teal. This was chained to the banks and could be pulled up at flood. My neighbours and I depended on cables and cages such as the ones I still use.

Then came the loggers with their "cats" and built a bridge some miles upstream, which looks as though it might last as long as the river. But the other day one of the logging company's engineers was spotted cooning it along a big hemlock log which had been felled across the river years ago. The Teal was leaping at his ankles and shouting its spring song, while the lad inched along and looked everywhere but down. So if that's what bridge builders are in this effete age we're not too sure—being sceptical mountain folk—that we can expect much of their creations. We've seen a lot of coming and going up our way. ✦

The abutment of an Indian bridge over a river flowing into the Skeena. Only in British Columbia are the Indians known to have built bridges.
National Museum of Canada



Below: The cage and cable system across the Teal River by which the author reaches his cabin. Picture at left shows the platform with two people aboard at the higher or 'town' side, where the cage is usually heavily laden to bring in supplies. The take-off point is part way up a big hemlock, reached by ladder. Freshets in spring and fall bring the water halfway up the platform supports. At right is the cage on the 'home' side. The cable from which the cage dangles is invisible against the trees.
Grant Madison

THE WILDLIFE JOURNALS OF WILLIAM ROWAN

BY JOHN PATRICK GILLESE

All illustrations except the first from photographs and drawings by William Rowan

THE muskeg in March was cold. After hours of searching through the desolate waste, the short, lean man stumbling back to his tent had seen only the track of a single snowshoe rabbit. Now, as he plunged through a tangle of willows, whose frozen tips clawed at his face, a great horned owl hooted and hurtled suddenly from a distant spruce.

The man turned, studying the muskeg fringes hung with evening hoar-frost. Then, with fresh determination, he began searching for the owls' nest. He discovered it finally—a high, rough tangle of branches encrusted with snow—wedged in the crotch of a tall balm (balsam poplar).

He paused again, wondering if the owlets were hatched yet; wondering—in this great year of rabbit scarcity—what they were feeding on. The blue dusk was deepening the cold was settling down. To climb the balm was gruelling labour but he began the job. He found three creamy-white, hungry owlets and, as he recorded in his journal that night, the parents were feeding them the age-old fare of horned owls. They were able to find rabbits, even when man failed.

He made notes on the wind-chill, the sweep and size of the drifts, what a winter-weary woodpecker was feeding on, the fact that he had noticed two Hungarian partridges apparently pairing off. Then he went to sleep in his tent in the muskeg with a blizzard brewing fitfully outside.

The man was Dr. William Rowan, writer, artist, sculptor, lecturer, professor of zoology at the University of Alberta, and—above all—wildlife scientist extraordinary, whose death in June 1957 (when he was 65) cut short a lifetime of scientific research into wildlife riddles of the Canadian northwest.

During that time, he had lived and worked intimately against the background of his "beloved outdoors." From his studies and scientific research came new game laws, new approaches to game management and conservation all over the continent. For his famous experiments in bird migration—in which he caused crows to fly north in mid-winter—he received world-wide acclaim and actually changed the thinking of centuries on the mystery. But his consuming passion was the wildlife ten-year cycle of abundance and scarcity, "the greatest mystery and the greatest problem in Canadian conservation," as he called it; and in 34 carefully-kept journals, covering 37 full years of accurate study of western wildlife, he has left, if not the answers to the many mysteries, at least a solid foundation upon which others may work—and a remarkable, colourful document for posterity.

These volumes—bound, indexed and profusely illustrated with photographs, drawings and even full-colour paintings by this 'Audubon of the West'—cover almost four complete turns of the baffling ten-year cycle. They contain thousands of records of weights, stomach-contents, age and sex ratios. At the time of Dr. Rowan's death, some fourteen scientific papers were being extracted from them for the Research Council of Alberta. Though the existence of the journals is still virtually unknown, undoubtedly they

Mr. Gillese is outdoors editor of a sportsman's magazine and a specialist in camping, woodcraft, and natural history.

Laddie Ponich Studio

The late Dr. William Rowan feeding a raven he tamed. Among other things, he demonstrated that even wild birds will learn to come for food at a regular time each day.

In his earlier days Dr. Rowan specialized in the study of birds. He photographed these eaglets in an eyrie in 1924.

will provide an invaluable basis for accurate forecasting of wildlife behaviour in the future.

As a scientist, Rowan achieved world renown. He was the first to bring the Flavelle Medal to western Canada; it was presented to him (in 1946) by the Royal Society of Canada, "for outstanding contributions to science." He had received the coveted Scholarship of the Universities Bureau of the British Empire (1936-37) awarded on an empire-wide competitive basis. When he walked into the Berlin Zoo, or the New York Zoo, or the London Zoo, he was greeted by name and treated as a distinguished guest. He broadcast for the British as well as on the Canadian Broadcasting Corporation. His chapter, "The Migration of Birds," in the Encyclopædia Britannica, brought him wide recognition. His painting of geese in flight decorated Canada's postage stamps. And he was made a Knight of the ancient Order of St. Hubert, in Vienna.

His journals tell little of this. Basically, they concern his work, his everlasting thirst for accurate wildlife findings. To countless farmers, trappers and outdoorsmen of the west, he was simply "Doc" Rowan. He was a familiar figure, with his ancient double-barrelled shotgun, which he could fire with deadly accuracy, and his battered old car, which he often drove right off the roads, across pastureland and bumpy beaver flats, even up the high stone-strewn hills round Hanna, Alberta. His journals reflect only a little of that colourful personality; they read more like the entries of Captain Palliser or David Thompson, who preceded Rowan and wrung a different set of secrets from the same little-known land.

Rowan reached Alberta in 1908, the year the University of Alberta was founded, and much the same time as the Hungarian partridge. Appropriately, he became the most colourful personality the University ever acquired; and the "Hun"—his favourite sporting bird—played a prominent part in his study of wildlife cycles, for in Alberta it did something completely foreign to its life on the plains of Bohemia: it "cycled" with the native birds, rising to incredible abundance, then suddenly disappearing. Rowan always regarded it as a significant actor in the great drama.

To understand the worth of his records, one has to look back to the west as he first saw it, when he wrote:

On the bald-headed prairies the aftermath of the drastic winter of 1906-07 was everywhere in evidence. The coulees were filled with the skeletons of starved cattle and horses. Fences were still almost unknown and only half-a-dozen gates had to be opened between Gleichen and my final destination, 50 miles to the north. The first wheat had just been successfully grown on Clark's Two-Bar Ranch, the sinister writing on the wall that was shortly to break up the limitless ranges so beloved by the cowboy. Badgers, later to become almost non-existent, were everywhere; and gophers, their main diet, sizzled in the sun. Coyotes were ubiquitous and the lovely little kit fox was still to be seen.

Two coyote pups sharing dinner with the cat. Many wild animals found haven in the Rowan home.

Alberta's roads were innocent of gravel in those days, and to go for a duck-shoot in wet weather was quite an adventure. You were never sure whether you would get there or not. Often you had to take the train home and salvage the car later. But the shoots were shoots! Thirty was the bag limit, and it was occasionally observed—notably by those who couldn't shoot!

Swathing was unknown, and sharp-tails* had lots of stooks to sit on. Hunters didn't take the game laws very seriously and it was nothing, during the great peak of 1925, to drive into a field, stick a .22 out of the window and get a dozen "chicken"* without moving from the car.

In short, wildlife was abundant, the migratory and upland game birds seemingly as limitless as the bison appeared to the plains hunters of half-a-century before. To Rowan, European-born and raised, it was an exciting and challenging spectacle. But, born observer that he was, he sensed that the same thing could happen to this abundance as happened to the buffalo and the passenger pigeon.

*Sharp-tailed grouse and prairie chicken or pinnated grouse.

The obvious solution was to understand these cycles in particular and the whole wildlife structure in general. What *caused* the fantastic migrations of waterfowl: instinct, shortening hours of sunlight, or some inherited knowledge? Had that factor anything to do with the fantastic rise and fall of the grouse and rabbit populations? If man knew what actually brought about the increase, could he duplicate it in low-cycle years and thus ensure continuous fine hunting? As an alternative, could he prevent the decrease? Not unless he knew what caused it, Rowan reasoned. Naturalists, like Ernest Thompson Seton, thought it was a "plague." Old-timers told of dying rabbits with "blue lumps behind their ears." Parasites?

These were the questions that spurred Rowan for the rest of his life. He never found all the answers, but he found some; certainly his research and advice contributed immensely to the all-round good hunting the foothills province enjoys today. Before the fur trade fell into decline, he hoped that the solution to the ten-year-cycle would one day help stabilize the income of those who depend on fur for a living, for when the rabbits "crash," many valuable furbearers, the lynx especially, fall with them.

Until 1930, he concentrated mostly on birds, with particular attention to the migratory waterfowl and upland game birds. His journals are packed with tales that tell much of the patience and perseverence he gave to all his field work. Fascinated by the great migrations at The Point on Cooking Lake (which he found to be an ideal spot for studying shore-waders) he made this entry on September 24, 1924:

> The most striking event of the trip was the migration of geese (White-Fronted) going on all day. Many thousands must have gone over, all at great height. At one time, we had ten flocks in sight at once, with 150 birds in one of the largest flocks. They are very irregular in their flight, shifting position all the time, a great contrast to cranes. Harold says that, in spite of the vast numbers, the migration was nothing in comparison with that of cranes in the storm on Friday.

Rowan was a shrewd and sympathetic outdoor analyst, as this entry of March 29, 1925, reveals:

> Rooney sent me four Hungarians picked up dead on the railway track near Blackfalds. All had died a violent death, injuries ranging from a broken skull and back, to bruised muscles and broken limbs. All the major injuries were on the left side, which suggests the birds were disturbed by a night train and probably all flew at the headlight. . . . This man has picked up large numbers of dead Hungarians, all on the tracks, all showing signs of a violent end. The railway men have been eating them all through the winter.

From the time he was invited to organize and head the Zoology Department of the University of Alberta in 1920 he was collecting specimens of all types, though wanton, or even unnecessary, killing was abhorrent to him. His

city home was a haven for many wild orphans, including a baby red squirrel (fed from a doll bottle) and a tame coyote (that loved to mingle in Edmonton's traffic, much to his anxiety). Specimens, however, are an invaluable aid to scientific research, and the doctor collected many, to be stuffed and mounted for his own infant Zoology Department, and often for other universities throughout America. He has many stories of such collecting trips. On July 2, 1925, for instance, he was out on a lake—a dot of soft-bottomed mud in the muskeg country—collecting small shore-waders. His shotgun shells were loaded with dust (so as not to damage the skins).

Suddenly he noticed a loon on the other side of the lake. "As he turned his head away from us, he showed up a dirty white neck. It was obviously a Black-throated Loon," a rarity. The men in the boat, with Rowan firing a distant, hopeful charge of dust, winged the loon, then spent a hectic half-hour retrieving the wounded bird. Dr. Rowan's notes conclude: "He was absolutely immaculate, in full plumage and spotlessly clean. Weight 4 pounds, one ounce."

Rowan was extremely thorough in cataloguing the wildlife of western Canada. To the casual observer a sandpiper is a sandpiper, sometimes confused with a snipe, but Rowan recorded the following species of sandpipers: Baird's Bartramian, buff-breasted, least, pectoral, semipalmated, solitary, spotted, stilt, and white-rumped.

The ducks that visit Alberta received special attention, for Rowan well knew the enjoyment duck-hunting gives to thousands of sportsmen, and he recorded bufflehead, canvasback, gadwall, American and Barrow's golden-eye, iron-clad, mallard, pintail, red-head, ruddy, scaup (greater and lesser), scoter (surf and white-winged), shoveller, teal (European, blue-winged, cinnamon and green-winged), widgeon, and wood. He also classified the sparrows that visit Alberta, seventeen species in all, from the chipping sparrow to the white-throat.

Rowan was a careful observer and never missed a detail, however slight, from the fact that a sage hen has "toes with side scales" to the note that "loons have a comical habit of waving one foot in the air while swimming." He could identify almost any bird in flight. He found their nests, sketched them in their native habitat, counted their parasites. He even recorded the melody of birds with musical notes.

To the uninitiated it might all have seemed wearisome work, but to the professor it was all part of his "beloved wilderness" (which was the title of a book he was writing when he died). More important, it was all necessary in order that man—such a comparative newcomer to the west—might understand how delicately nature balances herself.

The bulky nests of a community of great blue herons in the Alberta bushland.

A blue grouse cock showing-off in May at Twin Butte, Alberta.

In 35 years of exploring the western wastes and wilderness, Dr. Rowan rarely slept indoors. Sometimes he rested in a tent, often enough in a straw-stack or on a granary floor, even in below-zero temperatures. That hardiness, of spirit as much as of body, reflects itself in his records.

Countless people sent "the professor" specimens, and he himself rarely bagged a bird or animal without weighing it, noting what it ate and recording it all for future analysis. Here again is a typical detailed Rowan entry:

One of the photographs from Rowan's journals taken in 1925 when he was studying bird migration.

Scads of Huns, in covies and in pairs, and scores of pheasants, mostly cocks. Huns weighed 15½ (to) 14 oz. Pheasant 3 lbs., 1½ oz. Crop contents—Huns (2 out of 3) 100% wheat and oats, mostly oats; the third, wheat, oats, buckwheat and weed seeds, almost a third of each. Pheasant: about equal amounts barley, wheat, oats (weight of crop 4 oz. full).

With such information, of course, he was able to blast many erroneous attitudes concerning wildlife. To members of the Provincial Fish and Game Association, he recalled:

When the huge game peaks of 1924 and 1925 collapsed, two favourite explanations were offered; one, that competition with that heinous little upstart, the Hungarian partridge, which had recently reached central Alberta from the south, had decimated the chicken; the other, that poisoned grain, then being distributed on a vast scale in an almost province-wide grasshopper campaign, had cleaned them up. To settle this point Lawton [Chief Game Warden] had some sharptails trapped and fed them poisoned grain, on which they merely flourished and fattened. I personally took up the cudgels on the other count, to be fully vindicated ten years later on the crest of the next peak, when chickens and Huns came back in vast numbers together.

Likewise, when the foothills province found that pheasants, introduced in 1905, were failing to increase, Rowan literally hammered for an open season on cocks. "The sporting elite of the day were shocked," he told me later, "not understanding that the species is polygamous and cannot thrive unless given polygamy." Finally, game officials consented; the first pheasant season in Alberta was opened in 1939—and Alberta's pheasant shooting has done nothing but flourish since. On the southern irrigation areas alone, sportsmen often bag a day's limit in an hour.

However, all these battles on behalf of sportsmen and of wildlife itself (he agitated for the legislation that made Alberta one of the first places in the world to declare protection for hawks and owls) were secondary to 35 years of work on the mystery of the ten-year cycle.

"The fact that it existed was no discovery of my own," he said, in his farewell address to the Fish and Game League, "for it existed decades before I appeared on the scene. But its significance and its biological implications left such an impression on me when I witnessed the first peak and crash in 1925 and '26, that it inevitably became a research baby."

And so Rowan went to work, collecting specimens and data on the principal actors involved, the grouse, pheasant, magpie, evening grosbeak, blue-jay and over all, little *Lepus americanus*, the common varying hare, often called snowshoe rabbit.

An entry made May 8, 1942, is typical of his rabbit research. He was in the Home Lake district, "out to get some rabbits and count embryo." Out of six or seven shot the first evening, "one had six embryos, another three,

Rowan illustrated scientific and popular journals with studies such as this one of the great horned owl.

another one (nearly full-time) another none, but she was in milk: the others were males. One was quite clean inside; one loaded with cysts; one's ears loaded with ticks, another with some on snout, the next with none. Four had hard white lumps loose in the body cavity that looked like stale peas. They varied in weight and obviously in condition. We saw several that still have much white on them, and the filthiest of the ones we got was largely white."

Professor Rowan suspected it was a deficiency condition, rather than a direct outbreak of "plague," that killed off the actors in the cyclical drama, and he worked ceaselessly to try to verify his belief. By January 4, 1943, the data were accumulating, and he was "out"—which meant he was "chasing rabbits" every minute he could get away from his lecturing, in fair weather and foul. Likewise, somebody, somewhere, was always sending in news that might prove helpful—for western Canadians loved the professor, as much as his colleagues admired him. Thus this journal entry:

> Rabbits along the road at dusk were not remarkably abundant and nothing like 1934, Feb., on the same road, but they are heavily concentrated wherever there is extra feed of any sort.
>
> Hans Borgland, trapper from across the Athabasca, is taking in a batch of skins, including 400 squirrels, 160 weasels, 6 or 8 coyotes which he says were very plentiful and not yet mangy, 6 or 8 foxes, including one lovely silver and 3 crosses, and a timber wolf, one of a pack of 15, a huge fellow. He says he catches flying squirrels all the time and they are very numerous. He also says rabbits are dying in numbers right now and are very thick. He also says that chicken, ruffed grouse and spruce partridge are all very abundant and that Huns are across the Athabasca.
>
> Schmidt says the same about rabbits and has promised to send me in a sackful of them that have died, when he goes to Athabasca next week. He says that when he and his partner were returning from the Athabasca in the winter of 1934-5 (during which spring the rabbits died off wholesale) they estimated the rabbits on a patch of brush in the muskeg of about $1\frac{1}{4}$ acres at 10,000. They couldn't see ground for rabbits. This year he shot his cat (which had kittens) because she sometimes brought 15-20 rabbits into the stable during a day and the stalls got so perpetually messed up that he exterminated her.
>
> The abundance of hawks is striking.

Ten years later, the research was still going on, with Rowan noting "a marked excess of females." Naturally, specimens were taken and weights recorded. Eight females weighed from 3 lb. 13 oz. to 2 lb. 7 oz.; while two males weighed 3 lb. 13 oz., and 3 lb. 2 oz. respectively.

About this same period (January 1953) one of Dr. Rowan's students, Al Oeming, enters his journals (which contain references to the western world's most distinguished scientists and biologists). Oeming, who scared Edmonton mothers into caging their children when he

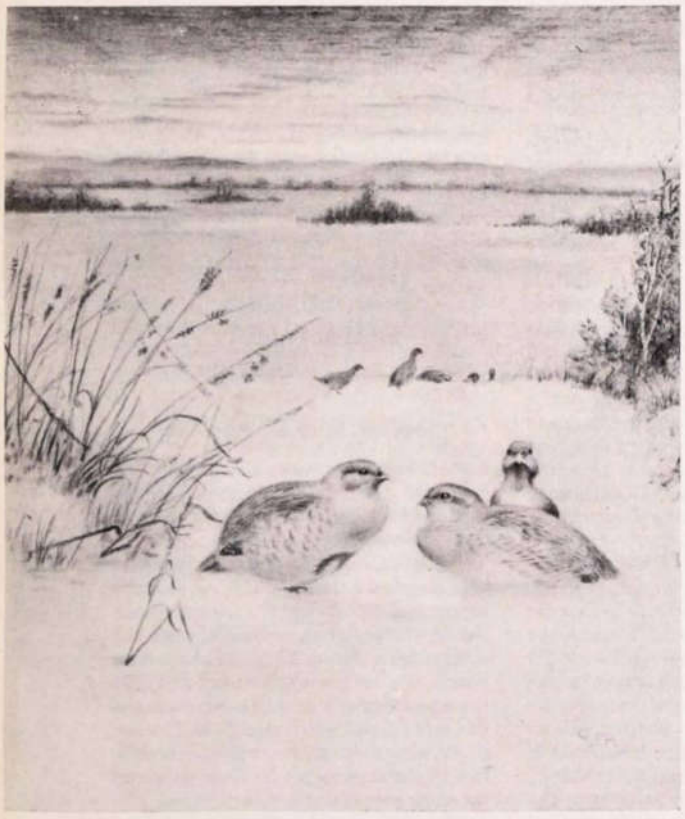
Rowan's best sketch of the plains bison was made in the London Zoo in 1937.

acquired a tame cheetah for a pet, was also collecting rabbits. One of them, the professor's journal records "died in a fit just after having been handled for ear-tagging. The other (as a previous one) developed paralysis in the hind legs and then died."

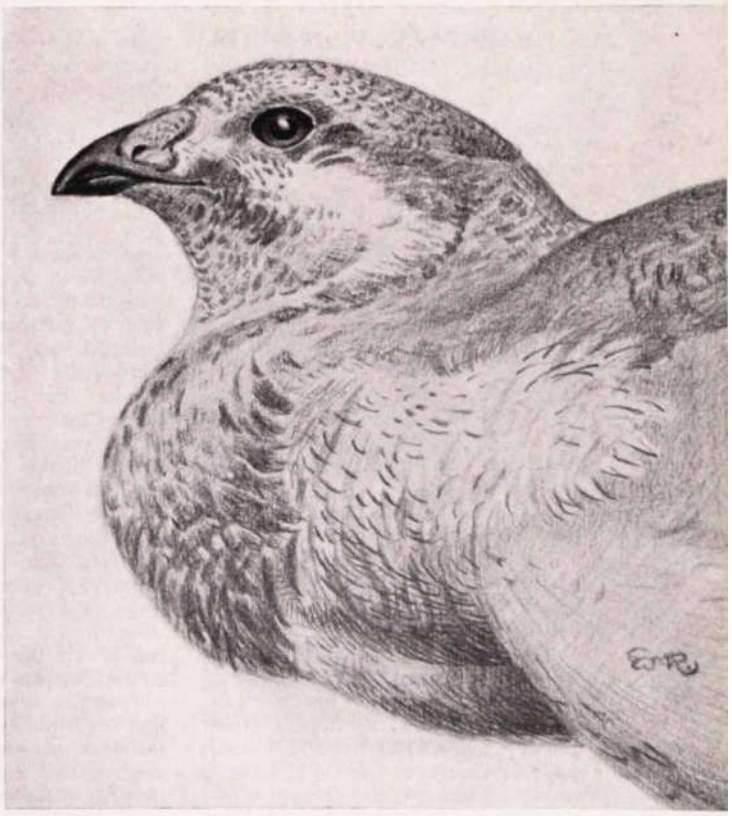
The weights, sex ratios, and health of jackrabbits as well are duly recorded, the places shot, the condition of the runs, the fact that "here and there are patches, really churned up with tracks, which Al considers their night-time playgrounds." The bitterest February weather found him digging his old car out of drifted sideroads, or "tramping through snow, knee-deep . . . no dead ones noticed."

The entire collection of notebooks would form at least forty publishable volumes, each page representing hours or days of driving, walking, photographing, sketching, experimenting, recording, often from long before sunrise until far into the night. It is not exaggerating to say that William Rowan's work and advice brought millions of dollars to the west, through sport hunting alone. Thanks largely to his pioneering efforts, Albertans in particular became aware of the value of game management; and most provinces now have the trained personnel he long ago recommended as the greatest investment they could make towards better management of their wildlife resources. Undoubtedly his journals will long be analysed and studied by other wildlife scientists and therein undoubtedly lies their greatest value.

Reading these journals, one is amazed at the incredible energy, vision, and diversity of talent of a man who, without too much publicity and frequently labouring under economic hardship, worked unceasingly to assess and understand our wildlife. His motives were simple. He loved the outdoors, and that love made the labour easier. And he wanted to help his fellow sportsmen. "Only in twentieth century scientific knowledge," he told them once, "lies your road to sporting survival." ◆



This scene of Hungarian partridges was a design by William Rowan for his Christmas card.



A field notebook sketch of a sage hen (a large grouse) to which were added complete data.

NORTHERN BOOKS

HEARNE'S COPPERMINE JOURNEY

by Farley Mowat

McClelland & Stewart, Toronto, 145 pages. $3.50.

Reviewed by Grace Lee Nute

ALMOST everyone knows the name of Samuel Hearne, has been told that he was one of North America's outstanding explorers, and connects him vaguely with the Hudson's Bay Company. Yet he remains a shadowy figure, largely because few have had an opportunity to read his own exciting accounts of his top-of-the-world journeys and judge the man's character and merits for themselves. The reason is simple enough: his chronicle has been republished only once since the original edition appeared in 1795. That edition of 1911 consisted of only five hundred copies—for members of the Champlain Society.

This small book by a distinguished author is by no means a new edition of Hearne's own account of his three journeys into or across the top of North America between 1769 and 1772. Instead, it is a very clever paraphrase of the most interesting and informative parts of the original edition. It is told in the first person, in modern language, and with modern spelling and punctuation; but the essential story and atmosphere are those of Hearne himself. The result is an exciting tale of adventure into a region unexplored by white men until Hearne's time.

Natives of various tribes of Indians and Eskimos are met, both as groups and as individuals. Hearne was no romanticist, and saw most of these men for what they were—crafty, childlike, unreliable, cruel, adapted to a strange way of life, unimpressed by white men and their gadgets and beliefs. Occasionally, however, he met a native (like his capable guide Matonabbee, and a girl who had escaped her captors and lived comfortably and absolutely alone over an Arctic winter) that excited his admiration.

He found the native women as a class more admirable and adaptable than the men, whose very lives on their customary and frequent treks over a barren countryside depended upon these frail (?) creatures, who could carry heavier burdens than the men, keep them in clothing, prepare their food, and otherwise support them. Indeed, the natives blamed the lack of success of Hearne's earliest trips on the absence of women. Yet these wives and mothers were treated abominably by their lords and masters. In sum, life in the north was not pleasant by any civilized standard, and Hearne does not attempt to prettify it. His account is the more valuable for this very reason.

An end map showing two of Hearne's journeys in search of copper mines about the mouth of Coppermine River adds materially to the pleasure of reading this book. There are no footnotes or illustrations.

Dr. Nute, author of many books and articles, is a well known authority on the travels of the fur traders.

THIS IS BRITISH COLUMBIA

by Ken Liddell

Ryerson Press, Toronto. 250 pages. $4.00.

Reviewed by R. M. Patterson

THIS readable book is a collection of good stories on southern and central British Columbia. The northern third of the province, except for one reference to Telegraph Creek (incorrect in itself and also misplaced in the index) and some account of the Police Trail, receives no mention here. That, however, does not detract from the excellence of the stories which are told with humour and just the right amount of restraint—witness the tale of the good ship *Fool Hen* on p. 51, also that of the unfortunate mishap to the captain of the *Gwendoline* on the same page.

The idea of a sketch map at the beginning of each section is an admirable one. The photographs are good, though the caption beneath that of the Peace

River, of which a *downstream* view is here shown, is misleading. More care might have been taken: the constant reference to the Windermere country as "the Windermeyer" leads one to wonder whether one has missed the point of some obscure joke: Prince Rupert, the first governor of the H.B.Co. was not the "dashing son of King Charles II" but rather his first cousin—scientist, cavalry leader and sea captain: and Inspector John Moodie and Constable Fitzgerald (p. 154) might have been given credit for the remarkable journey that they made in 1897-98. It was not Telegraph Creek that they reached after thirteen months on the trail, but, following their orders, the Klondike—at least 600 miles farther on by trail and river.

The best thing to do, perhaps, is to enjoy Mr. Liddell's stories which give a fascinating and entertaining picture of pioneer and present-day British Columbia and let the detail take care of itself.

Our readers are familiar with Mr. Patterson's writings on British Columbia, which he has travelled thoroughly.

NATURE IS YOUR GUIDE
by Harold Gatty

Collins, Don Mills, Ont. 254 pages. $3.50.

Reviewed by A. Copland

THERE is no wasted space in this compact little book. It is written by a world-renowned navigator to help the traveller who is concerned with finding his way in the outdoors. It goes back as far as the great days of the Polynesians whom he regards as the greatest path-finders in history and who first developed navigation by the stars to a fine art. More remarkable are the accomplishments of the Micronesian people of the Caroline and Marshall Islands, whose use of wave and swell charts as an aid to memory added a new dimension to the ancient art of orientation.

Here in Canada we still have our Indians and Eskimos who rank high amongst the dwindling company of natural navigators. Their way of making use of natural features of the country, of the direction and personality of the winds and snowdrifts, the anatomy and topography of local regions and the ever backward glance in anticipation of the return journey are all commented upon by the author. With the increased interest in northern developments, it might be well that we pay more attention to what we can learn from these people. Such things suddenly become very important to the castaway or the lost one and help to restore confidence.

The book is written to convince the reader of the real value of the five natural senses and to discourage the belief in a "sixth" sense. The shape of trees, the architecture of the arctic snows and the desert sands, the interesting facts about winds and erosion and the wisdom of the ant all have something to tell. The global aspects of Group Captain Gatty's book is important in a world shrunk by air travel.

There is an informative section on sea-bird lore and Gatty has done a fine survey in his exciting and breath-taking sweep of the oceans of the world. The accomplished author is burning with a desire to make nature an open book and to convince the reader that she has written boldly all over the planet Earth. Over one hundred works of reference have been consulted and a remarkable amount of travel has been done to check first hand some of the information that came his way.

Lieut.-General Doolittle, U.S.A.F., in his fine introduction pays tribute to Harold Gatty's ability and the manner in which he pursued his hobby. In his words the book will "illuminate and expand our pleasures in the outdoors and at the same time minimize its dangers."

The person who is interested in the outdoors for his own pleasure and the Youth Leader who is getting our young people interested will find much that is helpful in this book. As one who has travelled extensively in the company of natural navigators during years spent in the arctic, this reviewer found much to admire in this book. It is a work that will interest *Beaver* readers.

Sq.-Ldr. Copland, former H B C man, is a civilian employee of the Dept. of National Defence in the Directorate of Aircraft Engineering.

THE NEW WAY OF THE WILDERNESS
by Calvin Rutstrum

Macmillan Company, New York. 227 pages. $4.50.

Reviewed by George M. Douglas

THOSE planning a trip in the wilderness, no matter how experienced they may be, nor how well justified their confidence in themselves, would do well to read Calvin Rutstrum's book, and as "Touchstone" said "Learn of the wise and perpend." Mr. Rutstrum's wisdom and knowledge are exceptional.

In an early and important chapter of the book he considers the advantages of various types of canoe construction and, somewhat reluctantly one imagines, decides in favour of the aluminum canoe. Perhaps mere sentiment on the part of your reviewer is the reason he finds an aluminum canoe a dull, cold, lifeless craft, with unattractive qualities compared to a well-built all-wood canoe. Since the fine examples of the canoe builder's art, such as the Gordon "Flush Batten" or the Peterborough "Cedar Rib" are no longer obtainable, the only practical choice is the common "close rib longitudinal strip" type of construction most used on outboard-engine skiffs. A few years ago one of the older type was made, when the city of Peterborough gave one of their famous canoes to Princess Elizabeth and Prince Philip as a wedding present. They were then able to find an old craftsman who had not forgotten the art of building a cedar rib canoe, the highest point of perfection in canoe construction. His job was good but not up to former standards as to weight.

The author's remarks on the tendency of wood and canvas covered canoes to absorb water are only partly justified; it is a defect that can be modified by spraying the inside with a good quality varnish. The birch bark canoe soaks up water to an even greater extent but since the woodwork is usually unpainted it dries quicker.

Calvin Rutstrum's chapter entitled "Where am I?" is a valuable one; it emphasizes the likelihood of going astray even on a careful compass course, and perhaps blaming it on "local attraction." Errors are probable from steel or iron in one's clothing, or from the magnetic field on an outboard engine. The inherent tendency to travel in a circle is stressed by the author, and also the absurdity of the claim made by some that they have a sense of direction. It might prove interesting to find out by experiment whether the angle of deviation varies with different individuals, or in the same person from time to time. By a curious chance I discovered in my own case the circle in which I travel has a radius of about 900 yards!

Cooking in aluminum foil is certainly a "new thing" in the wilderness and on this practice I can make no comment, beyond saying it is not likely to be one attempted by myself. The long and complicated lists of food seem unnecessary as many of the items are alike in character. To the old timer such a multiplicity of items seems like pampering abnormal demands for variety.

One most convenient item of the "New Way" is the metal container equipped with spray valve holding insecticide mixed with gas under pressure; a real boon to campers for clearing mosquitoes out of a tent.

Space forbids quotation of the good advice proffered by Calvin Rutstrum in his book. The final chapter on "Survival" deserves special praise, with attention paid to the first paragraph of that chapter.

Mr. Douglas's personal experience of wilderness living goes back to the early decades of this century when he went to the Northwest Territories.

CLEAR LANDS AND ICY SEAS

by Theodora C. Stanwell-Fletcher

Dodd, Mead, Toronto. 261 pages. $4.50.

Reviewed by W. T. Larmour

MANY people have probably wondered what it would be like to travel in one of the small Hudson's Bay Company ships, through Canada's icy Arctic seas and along the coasts of clear lands. These, according to Mrs. Stanwell-Fletcher are comparatively unknown, uncharted, unexplored or unsurveyed.

Mrs. Stanwell-Fletcher, who had previously spent some time in western parts of the Canadian North, was eager and anxious to see something of the Eastern Arctic. She managed to secure passage in the *Rupertsland* and away she went from Montreal, all the way down the St. Lawrence, in an ecstasy of anticipation, which is so drawn out that it is nearly page 100 before the reader gets a sniff of the Arctic. Mrs. Stanwell-Fletcher is a *great lover* of the North.

She has many descriptions of the animal and bird life encountered, the changes in landscape; her impressions of Icebergs should end all writing on this theme for some time to come. Her descriptive passages might have been more effective if she had not, after a burst of lyricism written the following paralyzing sentence:

"That evening I excitedly covered three entire pages of my notebook trying to get some kind of satisfying description, or feeling, for those first icebergs."

Thereafter, in every descriptive passage, one is standing behind her chair, in that ship, leaning over her shoulder, watching the excitement of the author, not what she is intent on portraying. The omnipresent author, sweating over icebergs on paper makes a much more fascinating picture. Only once does she break the spell, when, forgetting the martyrdom of the writer's lot, she gives a moving account of the Bosun's accident and recovery.

During the trip the author became well acquainted (how could they escape?) with her fellow passengers and she also met the local folk at Fort Chimo, Payne Bay, Lake Harbour, Harrison, winding up at Churchill. She was extremely impressed by all the northern people with whom she came in contact. Her repetition, among others, of the words "nice" and "decent" and the infernally sparkling eyes, set them as a superior race apart.

She had better not have touched at all, at the last minute, on such subjects as the petty animosities that develop among isolated people, missionary work, sexual behaviour of both whites and Eskimos, loss of vigour and alertness among Eskimos. Her superficial observations produce only annoyance.

Nevertheless, *Clear Lands and Icy Seas* does recreate the voyage, down to the last detail of somebody's underwear. One is left with a feeling that *this* is what the trip was like.

For nice and decent northerners, with sparkling eyes and a strong disposition to kick each other in the teeth, the book may prove as slow-going as travel sometimes necessarily is in *Rupertsland.*

Mr. Larmour has worked in both Eastern and Western Arctic and has himself made the "Rupertsland" trip.

ON YOUR OWN IN THE WILDERNESS

by Townsend Whelen and Bradford Angier

Stackpole Co., Harrisburg, Pa. 324 pages. $5.00.

Reviewed by Jock Francine

THERE is plenty of meat in this informative book, and a bit of gristle as well, such as Colonel Whelen's statement in his Foreword—". . . recent writers, with three exceptions (Vilhjalmur Stefansson, Calvin Rutstrum, and Jay P. Williams) have had rather limited experiences, and their works cover largely the ways of modern sportsmen tied to the apron strings of a guide, of boys and girls camp instruction, and of automobile and motorboat camping." Either the Colonel never read R. M. Patterson's *The Dangerous River* or deliberately chose to ignore the writings of this doughty contributor to *The Beaver*, not to mention a number of other writers left out in the cold by this brash statement.

Colonel Townsend Whelen is well known to a generation and a half of readers of outdoor and riflery articles, and books on big game hunting. He is acknowledged an expert in these fields. Bradford Angier, who co-authored this book, while not as well-known as Colonel Whelen, has aptly demonstrated his knowledge of the wilderness in his book *Living Off the Country*, reviewed last spring in these pages. Between them, they have the material to produce a worth-while reference book on an interesting, and sometimes, vital subject. That they missed the boat, in this reviewer's opinion, is not due to that bit of gristle at the outset but rather to the layout of the material, the unhandy size of the book, its sketchiness on certain subjects, the lack of an index, and the ofttimes injected travel folder type of descriptions concerning the virtues of being "beneath open skies." As an example of the latter, I quote: "Stretch out beside the dancing warmth. Relax and let the hoo-ho-ho-hoooooing of whisper-winged owls, the yipping of coyotes, and if you're real lucky the sweet violent chorus of timber wolves lull you to sleep . . . . There is a wind high up in the trees, maybe, whirling splinters of ice from stars that shiver in a glacial blue-black sky. Some bird you've never heard before calls in the distance, like moonbeam turned to sound. You lay back finally, all tension slackening. Almost at once it is morning, and you are ready to travel again. Put your fire dead out." Pretty?—yes, but I'd rather know that if two men are poling a canoe upstream, both have to pole on the same side; or how to doctor a lame horse; or how often to feed my dogs to get the most bounce per ounce. However, the book contains plenty of material to educate those starting out into the wilderness on their own for the first time. The things left out, they can learn the hard way.

One-time fur trader in northern Quebec, Mr. Francine wrote of his return to that country in the Autumn 1956 "Beaver."

JOHN BLACK OF OLD KILDONAN

by Olive Knox

Ryerson Press, Toronto. 198 pages. $4.00.

Reviewed by Douglas Kemp

AMONG the principal conditions under which the Highland cotters engaged to venture the hazards and uncertainties of settlement in the Selkirk grant was that: "They were to enjoy the services of a minister, who was to be of their own persuasion." This condition unfulfilled was "to embitter every other calamity" suffered by the settlers for forty years. To the Presbyterians of the Red River, then, the arrival of the Reverend John Black in the fall of 1851 was a most auspicious event.

Olive Knox's new book tells the story of the thirty years of devoted ministry

by this man of God. From the time of his arrival, John Black cherished the hope of serving God in a different way in a different place, but always he found the needs of his pioneer parish too pressing to abandon. Religion and education were the bulwarks against barbarism in the isolated and primitive settlement at Red River, and the Scottish farmers there were the mainstays of civilized existence. His ministry among them was one of arduous pastoral duties, of a struggle against intemperance, of improvement of education, and of pressing for Presbyterian missions. Love, respect and a large measure of success were his rewards.

The author, in telling her story, has chosen to combine biography, history and fiction; a formidable task. As a result, each of the elements receives something less than its merited development. John Black, the subject of the book, never emerges as the complex individual he undoubtedly was. She involves him too deeply in the diffuse affairs of the Ross family, into which he married, to reveal properly the motives of behaviour and the qualities of mind and spirit which were his. The problem of history fiction, that of assimilating the stodge of facts and lighting upon a reasonable convention of dialogue, does not always find a satisfactory solution in this book. It was not meant to be a definitive study, however, and it is to be welcomed as a commendable introduction to a phase of life at Red River which has been somewhat neglected by writers to date.

Mr. Kemp is a high-school teacher who has made a study of the history of what is now Manitoba.

BRITISH COLUMBIA IN PICTURES

by

Richard and Lyn Harrington

Thomas Nelson, Toronto. $5.00.

Reviewed by Douglas Leechman

THE Harringtons' appreciation of, and admiration for, Canada's richest and most varied province is well demonstrated in this most attractive picture book. They know the area well and missed but few, if any, of its most interesting aspects.

The short space allotted to Mrs. Harrington for the text has prevented her from saying much that was undoubtedly in her mind, and the resulting compression has led her, perhaps, to avoid, only by a margin, a junior chamber of commerce enthusiasm. It's difficult not to be enthusiastic over such country.

The photographs, by Richard Harrington, are excellent and afford a good example of his more than competent work. His is that greatest gift of all artist-photographers, the ability to "see a picture." Many a time, Richard will take a picture of some subject that all others would ignore, and come up with something interesting and important. It is a pity that the reproduction can not do justice to the originals.

As a memento for those who have been to British Columbia, or as bait for those who have not yet seen it, this book would be difficult to surpass.

Dr. Leechman, archaeologist, author, lecturer, is one of those who have migrated to British Columbia.

BEN SNIPES, NORTHWEST CATTLE KING

by R. Sheller

Binfords & Mort, Portland, Oregon. 205 pages. $3.50.

Reviewed by Art Downs

THE outstanding feature of this book is that Ben Snipes differs radically from the popular conception of a man with drive sufficient to build a ranch which once ranged upwards of 120,000 cattle and 20,000 horses.

In 1855 at the age of twenty Ben started ranching in the Yakima Valley of Washington and eventually controlled an area larger than England. For many years he was the only white man in a region surrounded by Indians who resented the white man's intrusion to the extent of slaying many and fighting pitched battles with U.S. cavalry. But so much respect did they have for Snipes that he was never seriously molested. More amazing is the fact that he never carried a gun, even when he rode alone from the Cariboo goldfields where he had driven, and sold, his cattle, carrying $50,000 in gold dust for some 800 miles.

The book traces Ben's career from the time he left Iowa at 17 for the California goldfields. He found gold but his father had so conditioned him to the folly of being lured by the yellow dust that he sold his claim for $500 and hired out to the new owner. He then helped dig some $75,000 from the ground. But Snipes accepted this quirk of fate with a philosophical attitude that was to prove his most valuable asset.

On little more than the promise to repay he bought cattle and started a ranch which ultimately became so large that even the multitudes of Cariboo miners could not absorb his output. He faced disasters courageously and when at 68 and a millionaire he lost everything for the second time, he started again. When he died three years later he had another ranch and 100 cattle.

Slight confusion over British Columbia history puts the cattle drive to the Cariboo goldfields in 1856, though the rush began in 1860, but this is a minor error in a very interesting book.

Mr. Downs is managing editor of "Northwest Digest," magazine covering the interests of central and northern British Columbia.

OF MEN AND MARSHES

by Paul L. Errington

Brett-Macmillan, Toronto. 150 pp. $4.50.

THOUGH in the title men come first, it is the marshes that predominate in Professor Errington's book, and so persuasively does he write that he almost convinces a lover of woods and streams that marshes may have even more to offer to the perceptive. It is a book of charm and delicacy, of feeling for the wetlands that belong to the birds and the little animals. Lands that to the understanding human being can bring peace of mind and infinite interest. But there is far more than pleasing description, for Paul Errington has made a profound study of marshes and their inhabitants, about which he writes with such warmth and insight.

The book is chiefly about the glaciated wetlands of central North America, the region of marshes, sloughs, and potholes, but the author touches on marshes with different characteristics—those of desert and mountain and of the deep South.

There is much about that most important of wild fur-bearers, the muskrat, and its life throughout the year. The other creatures that live in or about the marshes are part of the picture—the mink and raccoons, the frogs and fishes, the ducks and geese and wading birds. Prof. Errington makes an eloquent plea for the conservation of the wetlands, the greater part already artificially drained, the remainder rapidly shrinking through man's acquisitive rearrangement of nature. In this he is supported not only by naturalists but by duck hunters and trappers, and though he is a lover of wildlife he is in sympathy with them, having at one time hunted and trapped for a livelihood. Some marshes indeed have already been restored, for the sake of the muskrat population and consequent fur production, and there is growing interest in the preservation of the prairie wetlands.

The drawings by Albert Hochbaum, director of the waterfowl research station on the Delta marshes of Manitoba, suit the mood of the book perfectly, and the publishers are to be commended for the attractive production that is in keeping with the treatment of the subject.—*M.B.*

AUTUMN PACKET

Centennial Year

The official opening of Fort Langley in July with the visit of Princess Margaret gives a focus to the centenary of British Columbia's attainment of colonial status. The growth and prosperity of B.C. confounds the gold miner on the Fraser who wrote to his friends in Upper Canada in 1859: "It never can be a *place*, because there is nothing to support it, except the mines, and just as soon as they are done the place goes down complete, for there is absolutely nothing to keep it up. . . ."

The letter of the disillusioned Charles Major, who had emigrated from the east, found its way into the Toronto *Daily Globe* as a horrible warning to other Canadians to stay at home. He adds: ". . . do not think that I have taken a dislike to the country because I am not making money; the dislike is general all over the country . . . it is not what it was represented to be."

Historically Minded

There are signs of increasing historical consciousness. After restoring Fort Langley, the Canadian government is now working at Prince of Wales's Fort near Churchill. Amateur archaeologists are busy, monuments and plaques are unveiled, and local folk museums are opened. One of the more colourful statues recently set up was that of a French-Canadian *voyageur*, more than twice life-size, on the Minnesota border in the Quetico-Superior wilderness area. An imaginative touch was the dedication of a lob tree to Sigurd Olson, author of *The Singing Wilderness* and president of the U.S. National Parks Association, who officiated at the ceremony. The *voyageurs* sometimes honoured a traveller with a lob stick—a tall tree lopped of all its side branches, which then became a landmark.

A nice impartiality in commemorative names was displayed by the council of Baie Comeau when confronted with three unnamed streets. The first name proposed was Jean-Raymond, after a persevering M. Tremblay who defied the H B C by settling on its land after the charter was changed to permit colonization and refusing to be driven off though his house was burnt down three times. The council was not quite happy about this and a few eyebrows were raised. A remedy was quickly found, for a street just behind the new H B C store was named Rupert in honour of the founder of the Company. As the report had it, the proposer of both names followed the punch in the belly by a good pat on the back. The third name was easy—that of the first *curé*.

Moving North

The Northland can be variously defined. It may be the area north of 60°, the southern edge of the Canadian Territories, or north of 55° at the base of Hudson Bay. Physically, climate and vegetation are qualifying factors. But taking the first, arbitrary definition, about 40 per cent of the land area of Canada is involved, with a sparse population of some 31,000. Something like five million people live north of 60° in the U.S.S.R.

The opening of communications, as discussed in Mr. Robertson's article, will make a big difference. Canada now has few roads and only one bit of railway north of 60 (in the Yukon); the line to Great Slave Lake will bring another. Railways in the north are no new idea. As far back as 1833 theorists in England were thinking of a route to Asia across British America. A bold plan was proclaimed in 1849 by William Gilpin, governor of Colorado, according to Archie Shiels, Washington historian. Gilpin's was to be the "Cosmopolitan Railway" crossing America to Denver thence north through Alaska and over Bering Strait by ferry to connect with Siberia and Europe.

A more practical type, Harry DeWindt, an English engineer and explorer, in 1896 investigated a suggested Franco-American line. Five years later he made the entire overland journey from Paris to New York, by way of Berlin, Moscow, across Siberia and Bering Strait. He reported that a line was possible with unlimited capital but impractical at that time and unlikely to pay.

In the 1850s railways were surging ahead in the States, western extensions drawing some derisive remarks from Upper Canada, the *Sarnia Observer* remarking on 27 October 1858: "The opening of the stage route from St. Louis to San Francisco has produced in the American papers further proof of the unfitness of the southern territories to support a railway across the continent." There was not enough water even to satisfy the passengers, and there was then neither coal nor wood for fuel.

It was another thirty years before the British route became a fact, but there were still people with an eye to the north and in 1896 the Hudson's Bay & Pacific Railway Company was chartered, to run west from Churchill. Like others, it never got farther than the charter.

SUBSCRIBE TO

The Beaver

Published quarterly One year $2 ☐
Three years $5 ☐

Mail this form with remittance to

The Beaver, Hudson's Bay House
Winnipeg 1, Canada

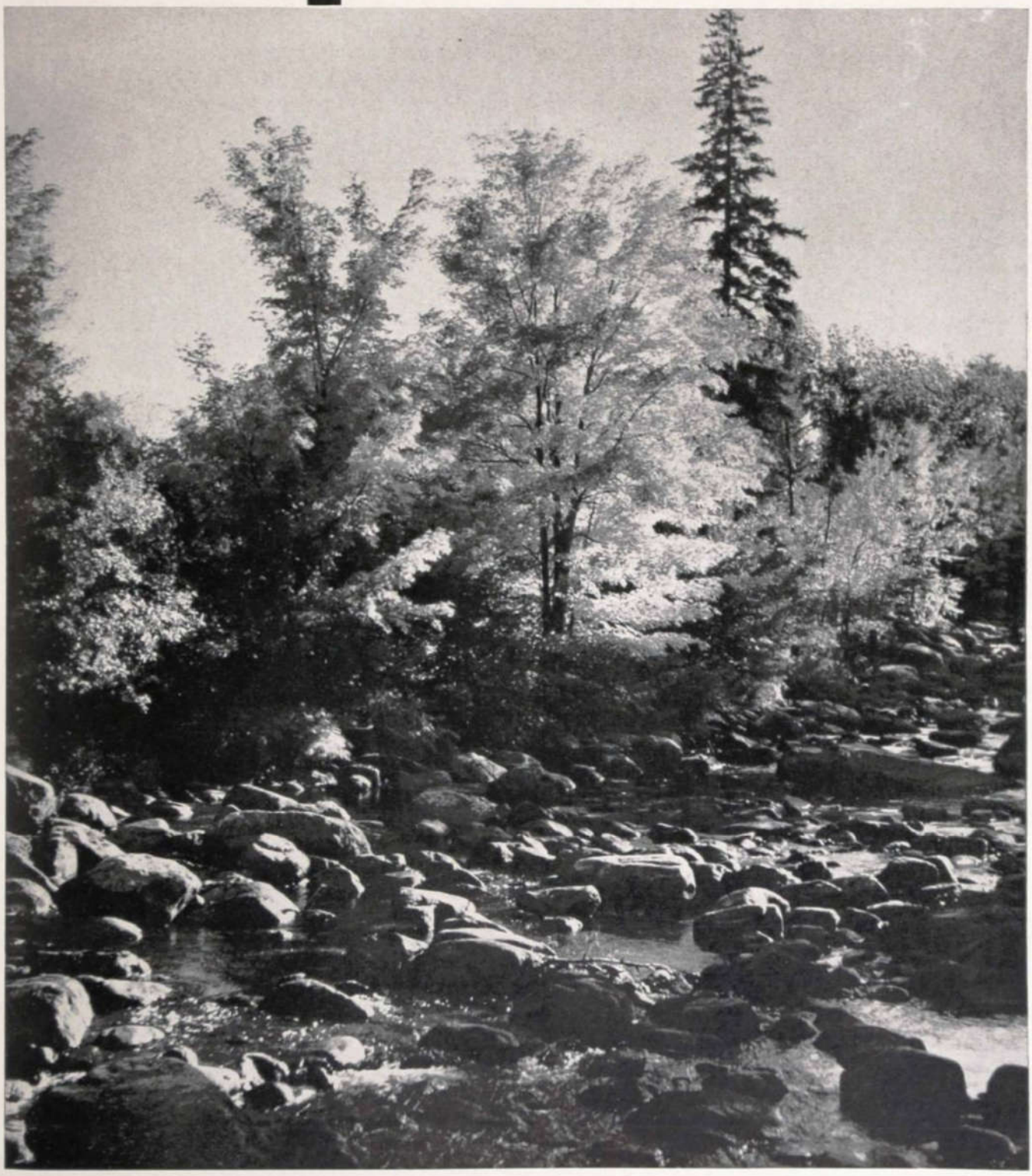
(Please make cheques payable to Hudson's Bay Company)

NAME.....

ADDRESS.....

.....

The eye of the camera records what is before it—a jumble of stones in the bed of a stream, the luminosity of a tree in autumn brilliance. The eye of an artist has found the scene, has visualized it as a design. This picture shows in black and white the view photographed by Harold V. Greene in colour, from which he created The Beaver *cover, one of the folded patterns he devises by means of a kaleidoscope made by himself and by a system of lenses and mirrors.*



as served to the
Company's Officers
since 1701
TURN TO OPEN
The Governor and Company of Adventurers of England Trading into Hudsons Bay
INCORPORATED 2ND MAY 1670
HUDSON'S BAY
BRAND
Best Procurable
BLENDED SCOTCH WHISKY
100% SCOTCH WHISKIES
Produce of and Bottled in Scotland by
Hudson's Bay Company
EDINBURGH, SCOTLAND.
86·8° PROOF
REG. U.S. PAT. OFF.
4/5 QUART
IMPORTED BY
Hudson's Bay Company Inc.
NEW YORK, N.Y.
BLENDED SCOTCH WHISKY. 86.8 PROOF. HUDSON'S BAY COMPANY INC., NEW YORK, N.Y., IMPORTERS